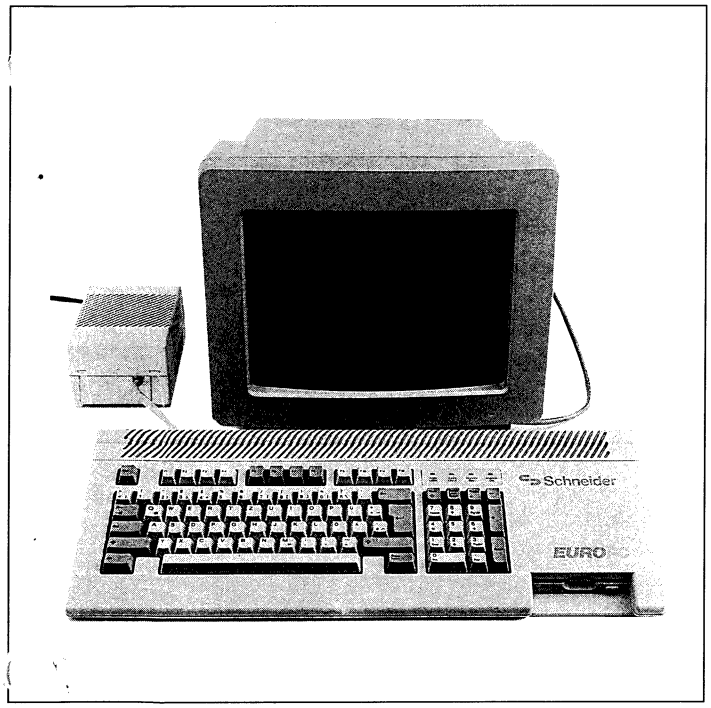
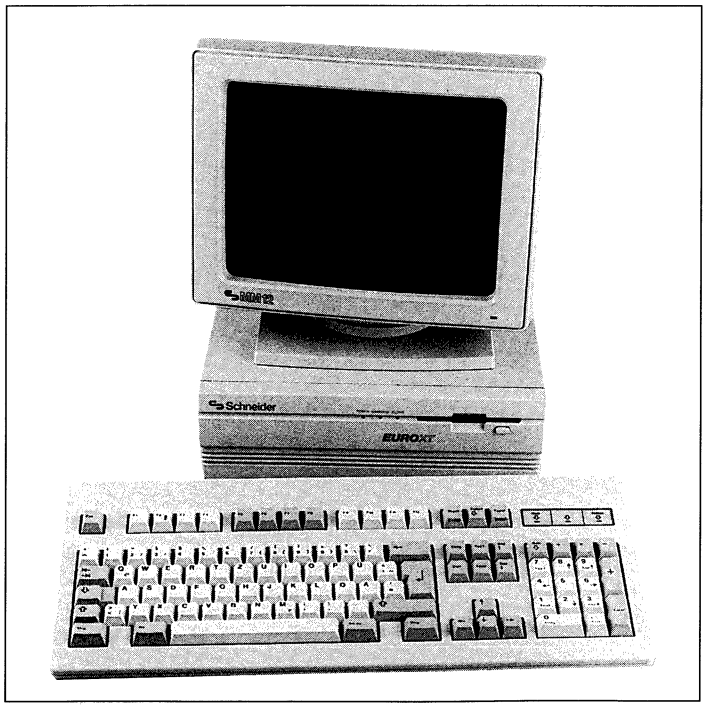
Kundendienst-Handbuch
Service Manual

Schneider

SYSTEMEINHEIT
EURO PC
EURO PC II
EURO XT





********* ACHTUNG! *********

Für Daten aller Art, die sich bei Einsendung an die Firma Schneider im Servicefall oder in jedem anderen Fall noch auf einem Datenträger befinden, wird bei Verlust oder Beschädigung keinerlei Haftung übernommen!
Bitte, sichern Sie sich Ihre Daten vorher von Ihrem Datenträger. Wie man eine Sicherungskopie erstellt, können Sie in Ihrer MS-DOS-Betriebsanleitung nachlesen.

********* IMPORTANT! *********

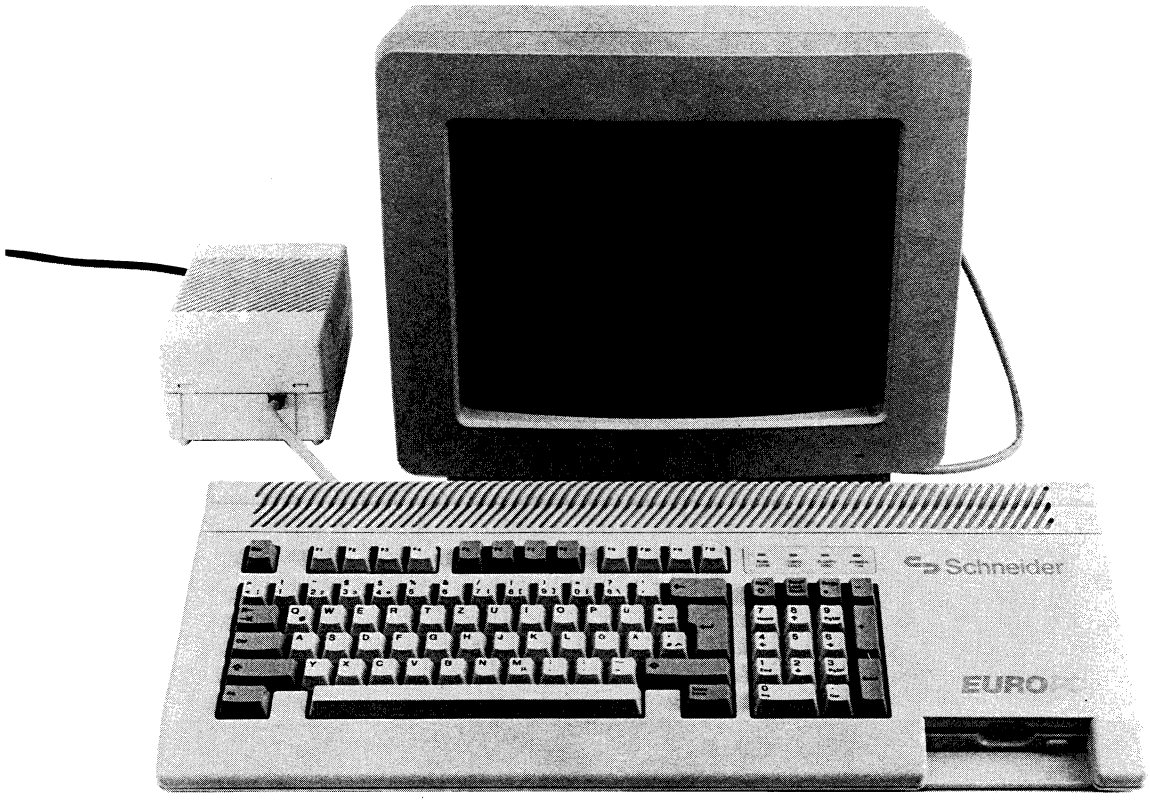
We accept no responsibility for the loss of or damage to data of any kind which is still contained on a data carrier which is sent to Schneider for servicing or for any other reason!
Please copy your data from your data carrier beforehand. You can read how to produce a backup copy in your MS-DOS operating instructions.

Kundendienst-Handbuch
Service Manual

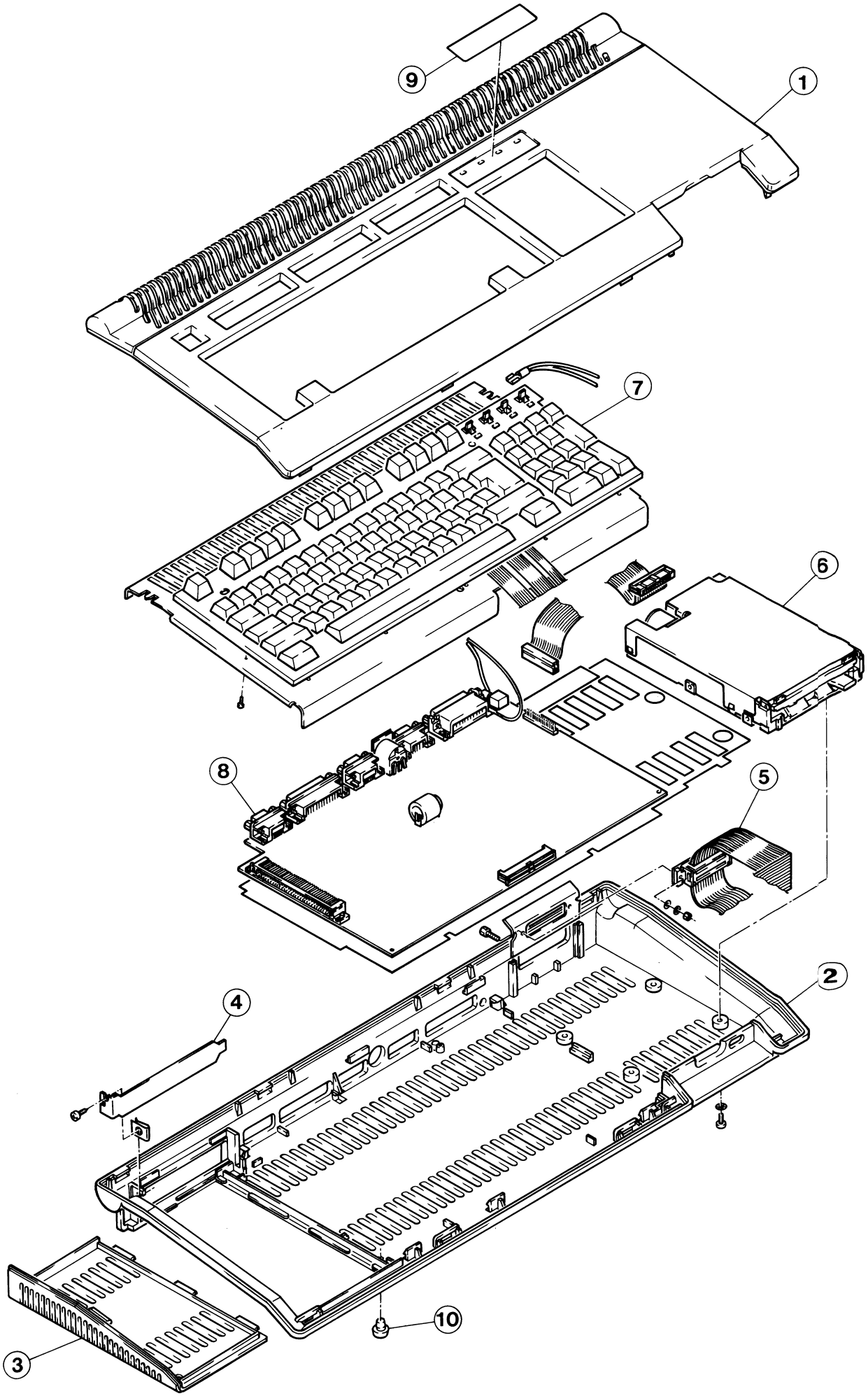
Schneider

SYSTEMEINHEIT
EURO PC

Ident-Nr.: 43006



Exploded view



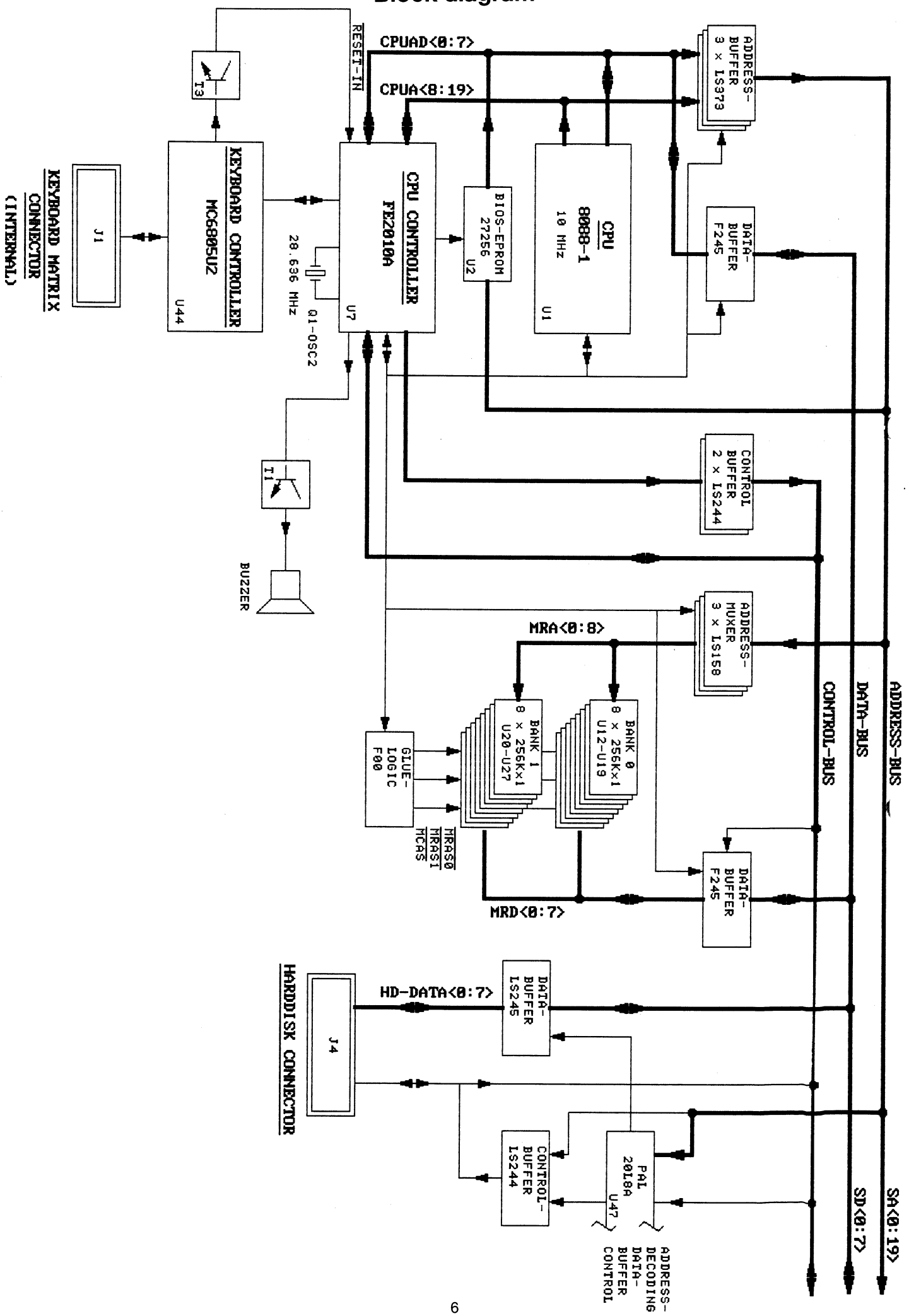
Ersatzteilliste für Systemeinheit Euro PC
Parts List for System Unit Euro PC

Best.-Nr. Part.-No.	Bezeichnung	Description	Zeich.-Pos. Ref.-No.	Preisgruppe
50 058 00	Styropor Euro PC	Polyfoam		B 7
50 024 00	Faltkarton Euro PC	Gift box		B 7
51 509 00	Gehäuseoberteil	Cabinet, top	1	C 7
50 842 00	Gehäuseboden	Cabinet, bottom	2	C 6
50 012 00	Gehäuseklappe	Cabinet, door	3	B 4
50 020 00	Blindblech	Plate, blind	4	A 7
50 018 00	Kabelbaum FDD	Cord FDD	5	C 5
50 017 00	Floppylaufwerk	Floppy disk drive	6	G 1
50 056 00	Druckknopf für Floppy (Toshiba)	Push-button, Floppy (Toshiba)		A 5
50 294 00	Druckknopf für Floppy (Sony)	Push-button, Floppy (Sony)		A 5
50 016 00	Tastatur (D)	Switch keyboard (D)	7	E 5
50 148 00	Tastatur (F)	Switch keyboard (F)		E 5
50 149 00	Tastatur (GB)	Switch keyboard (GB)		E 5
50 161 00	Tastatur (CH)	Switch keyboard (CH)		E 5
50 162 00	Tastatur (DK)	Switch keyboard (DK)		E 5
50 163 00	Tastatur (E)	Switch keyboard (E)		E 5
50 165 00	Tastatur (N)	Switch keyboard (N)		E 5
50 166 00	Tastatur (S/SF)	Switch keyboard (S/SF)		E 5
50 565 00	Tastatur (TR)	Switch keyboard (TR)		E 5
50 566 00	Tastatur (P)	Switch keyboard (P)		E 5
50 567 00	Tastatur (GR)	Switch keyboard (GR)		E 5
52 182 00	Tastatur (SU)	Switch keyboard (SU)		E 5
52 183 00	Tastatur (UAE)	Switch keyboard (UAE)		E 5
50 015 00	Platine CPU	CPU-board	8	J 1
50 014 00	Klebeschild	Sheet	9	A 6
50 141 00	Gehäusefuß	Leg, cabinet		A 2
50 023 00	Typenschild	Sheet, rating		A 3
50 003 00	Netzteil Euro PC	Power supply		F 0

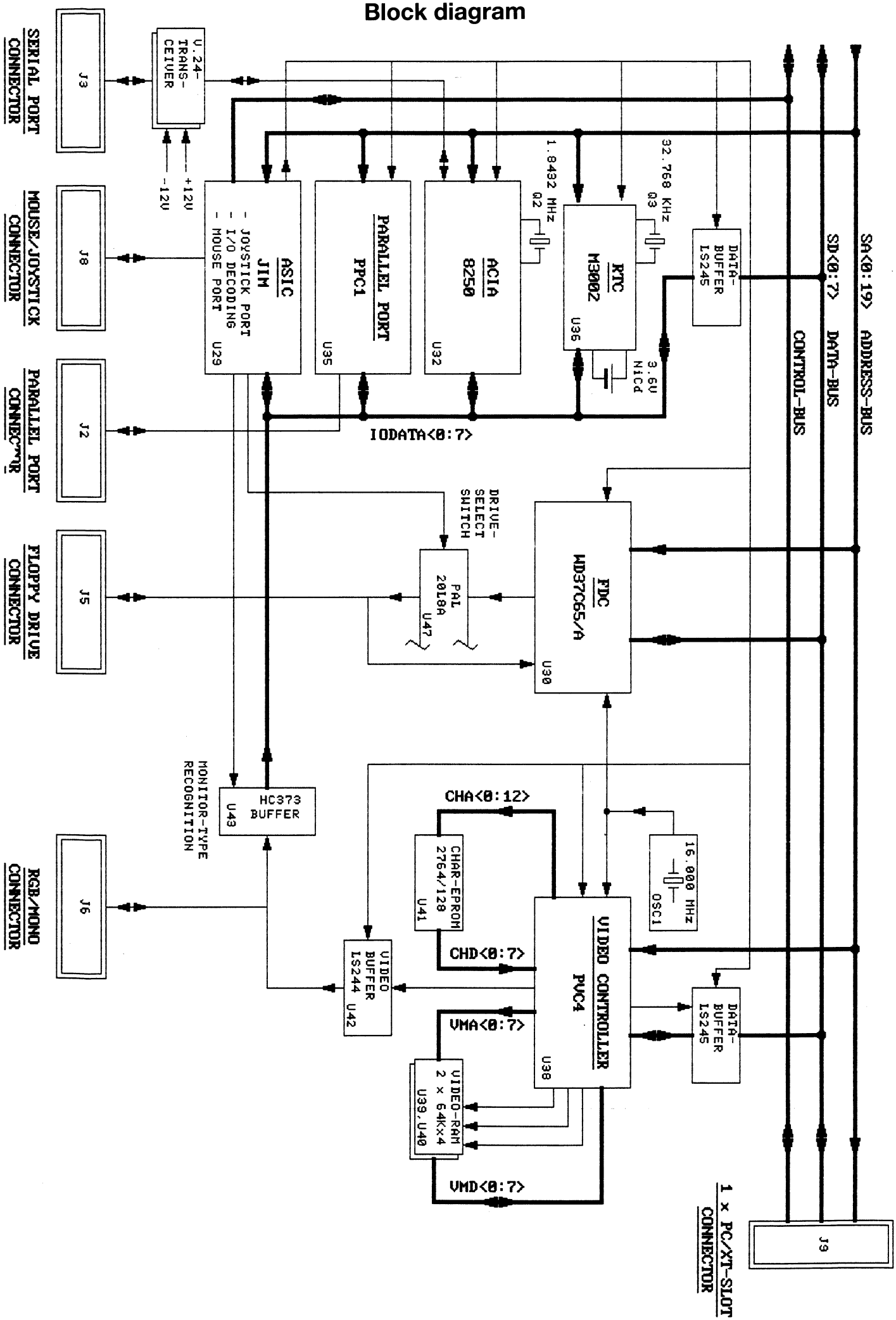
Note: All spare parts with country-index are reserved for foreign distributors only.

All 3.5″ and 5.25″ floppydisks must be replaced by new ones. Schneider passes no exchange price to the distributor or dealer.

Block diagram



Block diagram



REVISIONS

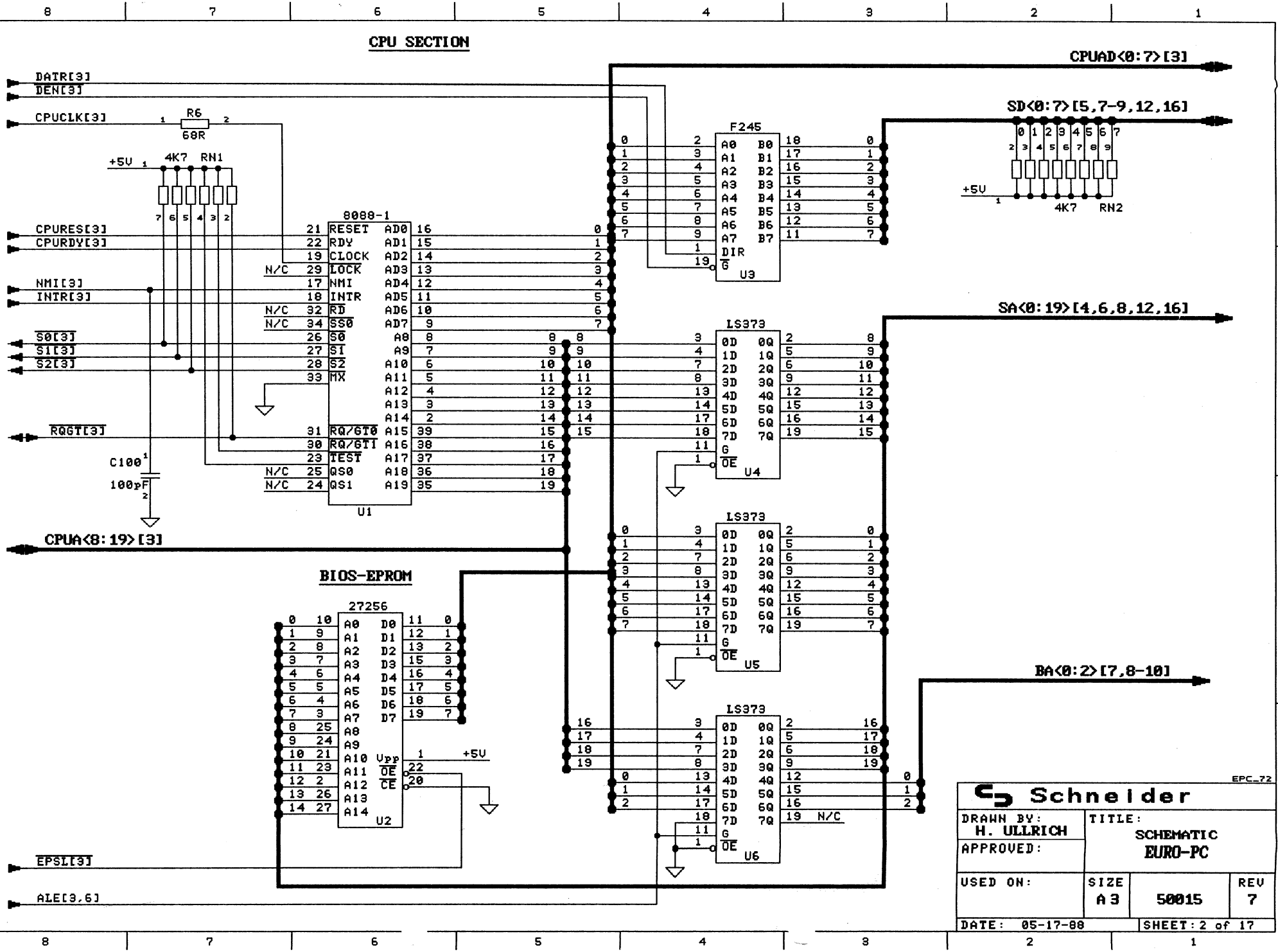
LTR	DESCRIPTION	DATE	APPROVED
1	ADVANCED ENGINEERING RELEASE	12-27-87	H. ULLRICH
2	UPDATE	~~02-18-88~~	~~H. ULLRICH~~
3	UPDATE HARDDISK INTERFACE	03-03-88	H. ULLRICH
4	UPDATE POWERON FOR EXT. HDD/FDD	03-31-88	H. ULLRICH
5	PREPRODUCTION RELEASE (REV.3 PCB)	04-13-88	H. ULLRICH
6	REWORK: ADD VCC TO HDD CONN., SUBSTITUTE L1 BY WIRE JUMP. (REV.4 PCB)	05-05-88	H. ULLRICH
7	REWORK: ADD ALTERNATE OSC2 (REV.5 PCB)	05-17-88	H. ULLRICH

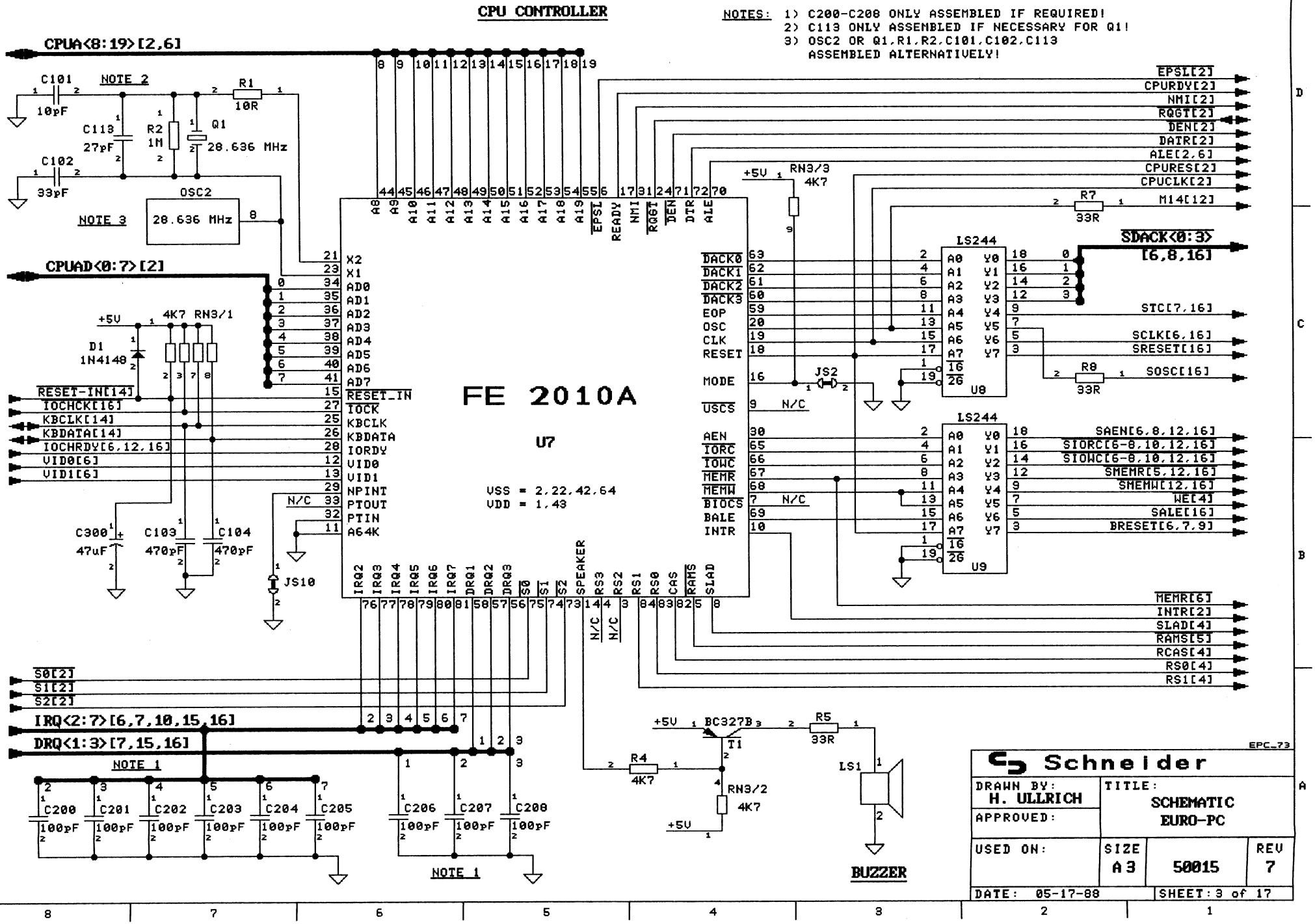
DRAWING FILES:	CONTENTS:
EPC_71.DWG	THIS SHEET
EPC_72.DWG	CPU SECTION
EPC_73.DWG	FE2010A SECTION
EPC_74.DWG	/RAS-/CAS DECODING, ADDRESS MULTIPLEXER
EPC_75.DWG	512 KB MAIN RAM
EPC_76.DWG	ASIC JIM
EPC_77.DWG	FLOPPY INTERFACE
EPC_78.DWG	HARDDISK INTERFACE
EPC_79.DWG	SERIAL INTERFACE
EPC_710.DWG	PARALLEL INTERFACE
EPC_711.DWG	REAL TIME CLOCK
EPC_712.DWG	PVC4 VIDEO CONTROLLER
EPC_713.DWG	VIDEO RAM, CHAR. ROM
EPC_714.DWG	KEYBOARD CONTROLLER
EPC_715.DWG	CONNECTORS I
EPC_716.DWG	CONNECTORS II
EPC_717.DWG	BLOCK CAPS

EPC_71

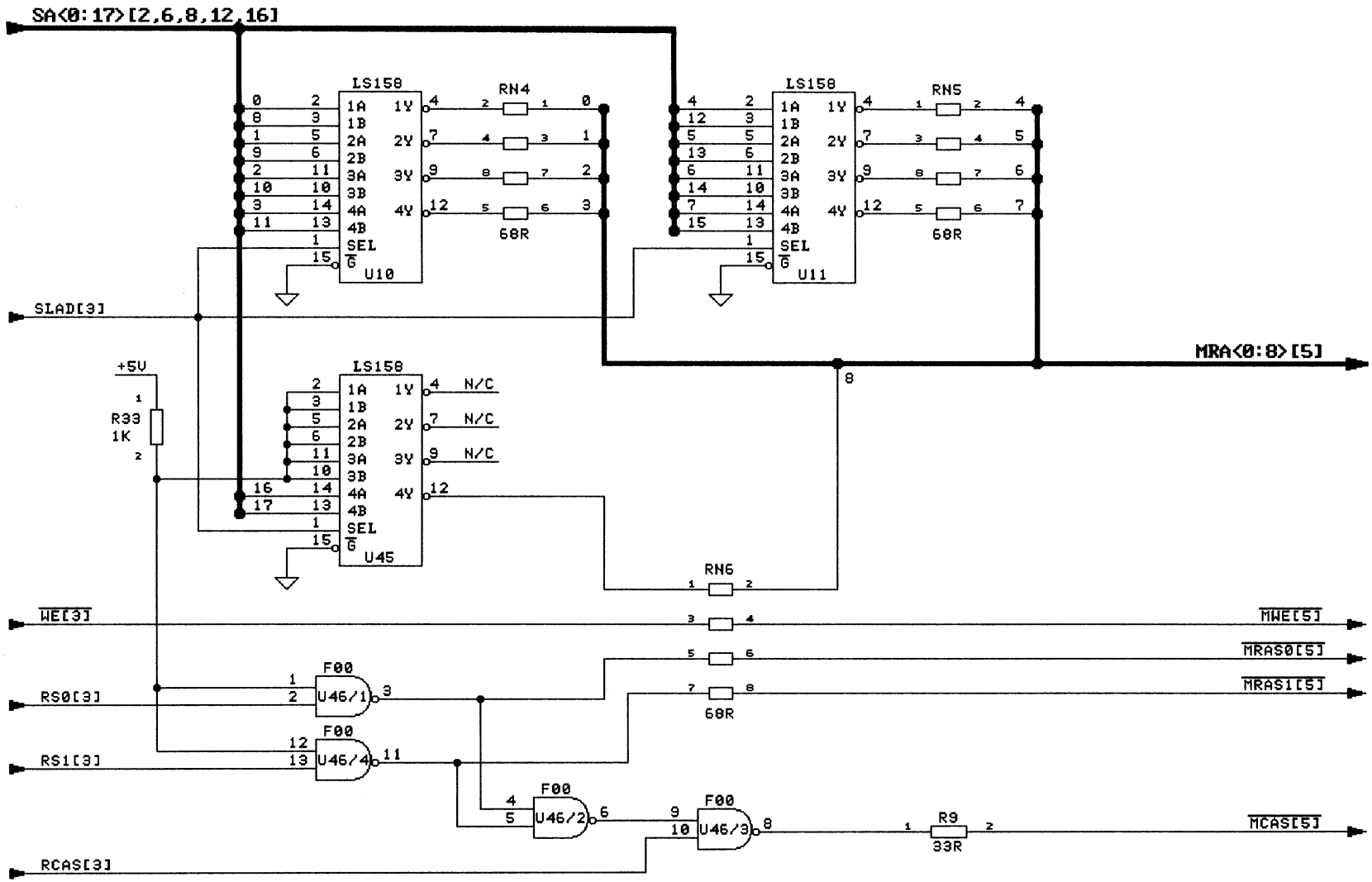
Schneider

DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 1 of 17		


CPU SECTION
DATR[3]
DEN[3]
CPUCLK[3]
R6
68R
+5V
4K7 RN1
8088-1
CPURES[3]
CPURDY[3]
NMI[3]
INTR[3]
S0[3]
S1[3]
S2[3]
RQGT[3]
C100
100pF
RESET
RDY
CLOCK
LOCK
NMI
INTR
RD
SS0
S0
S1
S2
MX
RQ/GT0
RQ/GT1
TEST
QS0
QS1
AD0
AD1
AD2
AD3
AD4
AD5
AD6
AD7
A8
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
A19
U1
CPUA<8:19>[3]
CPUAD<0:7>[3]
F245
A0
A1
A2
A3
A4
A5
A6
A7
B0
B1
B2
B3
B4
B5
B6
B7
DIR
G
U3
SD<0:7>[5,7-9,12,16]
+5V
4K7 RN2
SA<0:19>[4,6,8,12,16]
LS373
0D
1D
2D
3D
4D
5D
6D
7D
0Q
1Q
2Q
3Q
4Q
5Q
6Q
7Q
G
OE
U4
U5
U6
BA<0:2>[7,8-10]
N/C
BIOS-EPROM
27256
D0
D1
D2
D3
D4
D5
D6
D7
Upp
OE
CE
U2
EPSL[3]
ALE[3,6]
EPC_72
Schneider
DRAWN BY:
H. ULLRICH
APPROVED:
TITLE:
SCHEMATIC
EURO-PC
USED ON:
SIZE
A3
50015
REV
7
DATE: 05-17-88
SHEET: 2 of 17


CPU CONTROLLER
NOTES: 1) C200-C208 ONLY ASSEMBLED IF REQUIRED!
2) C113 ONLY ASSEMBLED IF NECESSARY FOR Q1!
3) OSC2 OR Q1,R1,R2,C101,C102,C113 ASSEMBLED ALTERNATIVELY!
CPUA<8:19>[2,6]
CPUAD<0:7>[2]
FE 2010A
U7
VSS = 2,22,42,64
VDD = 1,43
C101 10pF
C113 27pF
C102 33pF
R1 10R
R2 1M
Q1 28.636 MHz
OSC2 28.636 MHz
NOTE 2
NOTE 3
D1 1N4148
4K7 RN3/1
RN3/3 4K7
RESET-IN[14]
IOCHCK[16]
KBCLK[14]
KBDATA[14]
IOCHRDY[6,12,16]
VID0[6]
VID1[6]
C300 47uF
C103 470pF
C104 470pF
JS10
JS2
EPSL[2]
CPURDY[2]
NMI[2]
RQGT[2]
DEN[2]
DATR[2]
ALE[2,6]
CPURES[2]
CPUCLK[2]
M14[12]
R7 33R
R8 33R
LS244
U9
SDACK<0:3> [6,8,16]
STC[7,16]
SCLK[6,16]
SRESET[16]
SOSC[16]
SAEN[6,8,12,16]
SIORC[6-8,10,12,16]
SIOWC[6-8,10,12,16]
SMEMR[5,12,16]
SMEMW[12,16]
WE[4]
SALE[16]
BRESET[6,7,9]
MEMR[6]
INTR[2]
SLAD[4]
RAMS[5]
RCAS[4]
RS0[4]
RS1[4]
S0[2]
S1[2]
S2[2]
IRQ<2:7>[6,7,10,15,16]
DRQ<1:3>[7,15,16]
NOTE 1
C200 100pF
C201 100pF
C202 100pF
C203 100pF
C204 100pF
C205 100pF
C206 100pF
C207 100pF
C208 100pF
BC327B
T1
R5 33R
R4 4K7
RN3/2 4K7
LS1
BUZZER
EPC_73
Schneider
DRAWN BY: H. ULLRICH
APPROVED:
TITLE: SCHEMATIC EURO-PC
USED ON:
SIZE A3
50015
REV 7
DATE: 05-17-88
SHEET: 3 of 17

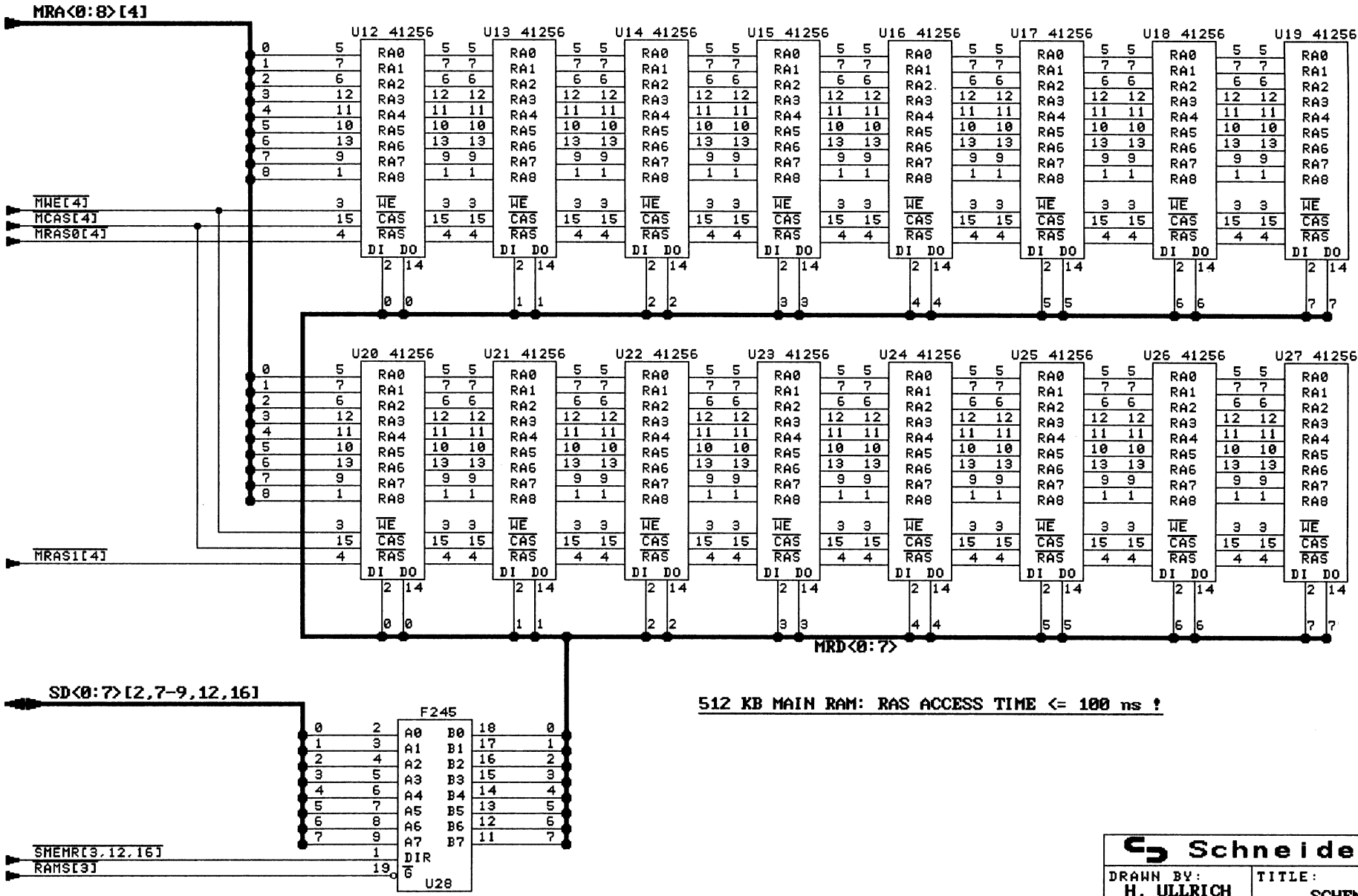
/RAS-, /CAS-DECODING, ADDRESS MULTIPLEXER



EPC_74

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 4 of 17		

512 KB MAIN RAM



512 KB MAIN RAM: RAS ACCESS TIME <= 100 ns !

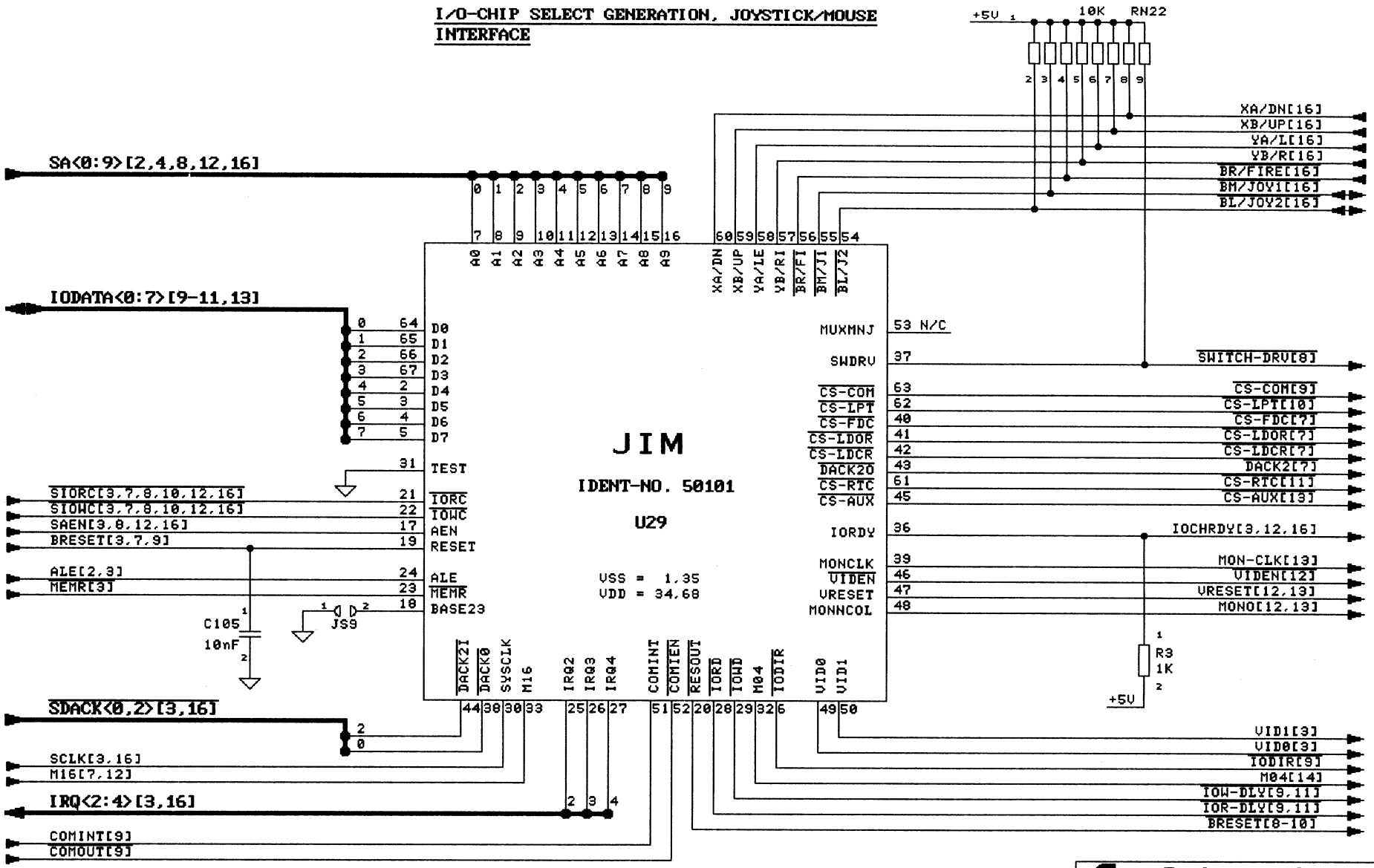
EPC_75

Schneider

DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 5 of 17		

12

I/O-CHIP SELECT GENERATION, JOYSTICK/MOUSE INTERFACE

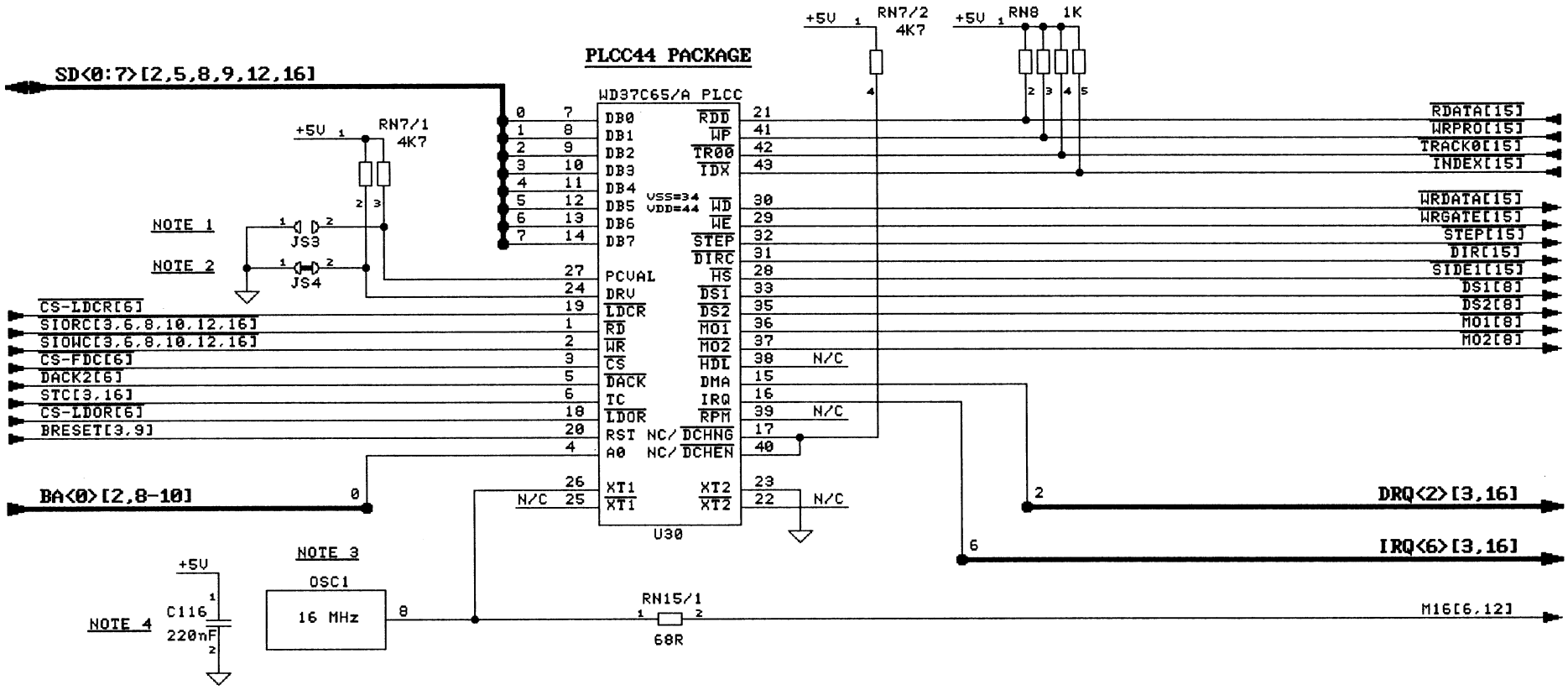


EPC_76

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 6 of 17		

13

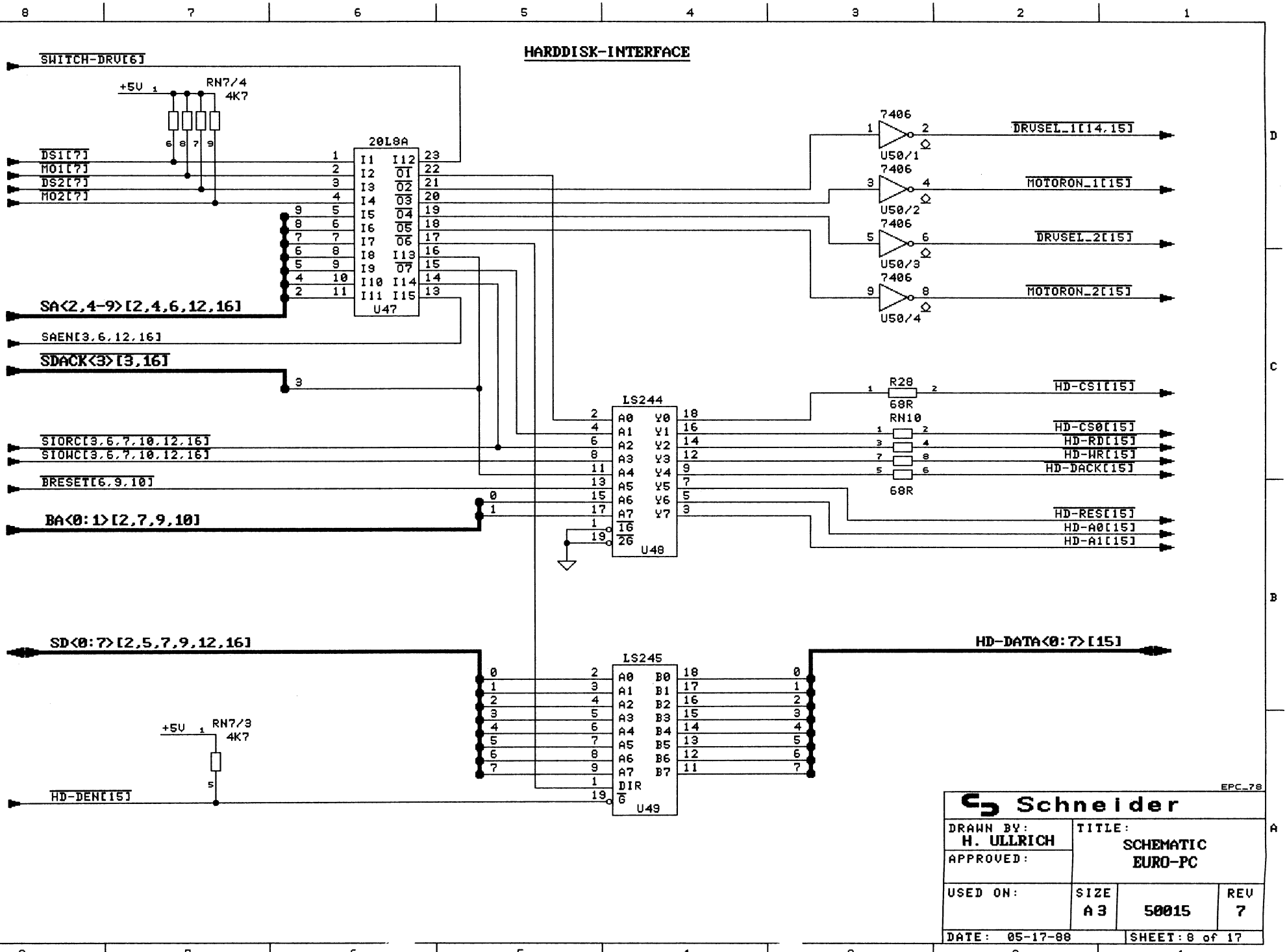
FLOPPY DISK CONTROLLER



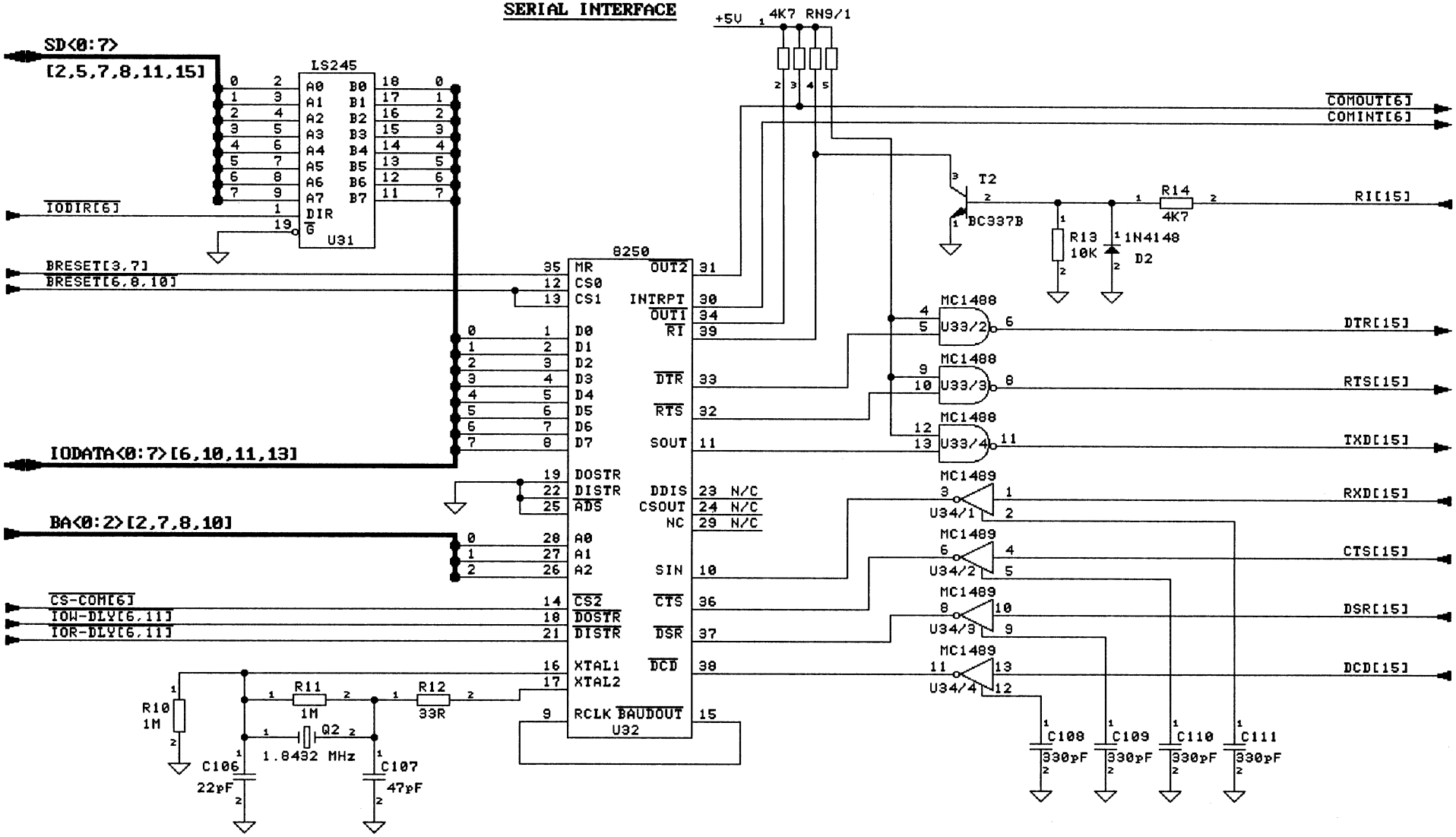
NOTES: 1) JS3 SELECTS WRITE PRECOMP. VAL.:
JS3 OPEN : 125 ns
JS3 CLOSED: 187 ns
2) JS4 SELECTS 2 SPEED SPINDLE DRIVE IF CLOSED
3) OSCILLATOR +- 100 ppm, CMOS OUTPUT
4) C116 IS BLOCK CAP FOR OSC1

EPC_77

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 7 of 17		


HARDDISK-INTERFACE
SWITCH-DRV[6]
+5V
RN7/4
4K7
DS1[?]
MO1[?]
DS2[?]
MO2[?]
20L8A
U47
SA<2,4-9>[2,4,6,12,16]
SAEN[3,6,12,16]
SDACK<3>[3,16]
SIORC[3,6,7,10,12,16]
SIOWC[3,6,7,10,12,16]
BRESET[6,9,10]
BA<0:1>[2,7,9,10]
LS244
U48
7406
U50/1
U50/2
U50/3
U50/4
DRVSEL_1[14,15]
MOTORON_1[15]
DRVSEL_2[15]
MOTORON_2[15]
R28
68R
RN10
HD-CS1[15]
HD-CS0[15]
HD-RD[15]
HD-WR[15]
HD-DACK[15]
HD-RES[15]
HD-A0[15]
HD-A1[15]
SD<0:7>[2,5,7,9,12,16]
LS245
U49
HD-DATA<0:7>[15]
RN7/3
HD-DEN[15]
Schneider
DRAWN BY: H. ULLRICH
APPROVED:
TITLE: SCHEMATIC EURO-PC
USED ON:
SIZE A3
50015
REV 7
DATE: 05-17-88
SHEET: 8 of 17
EPC_78

SERIAL INTERFACE

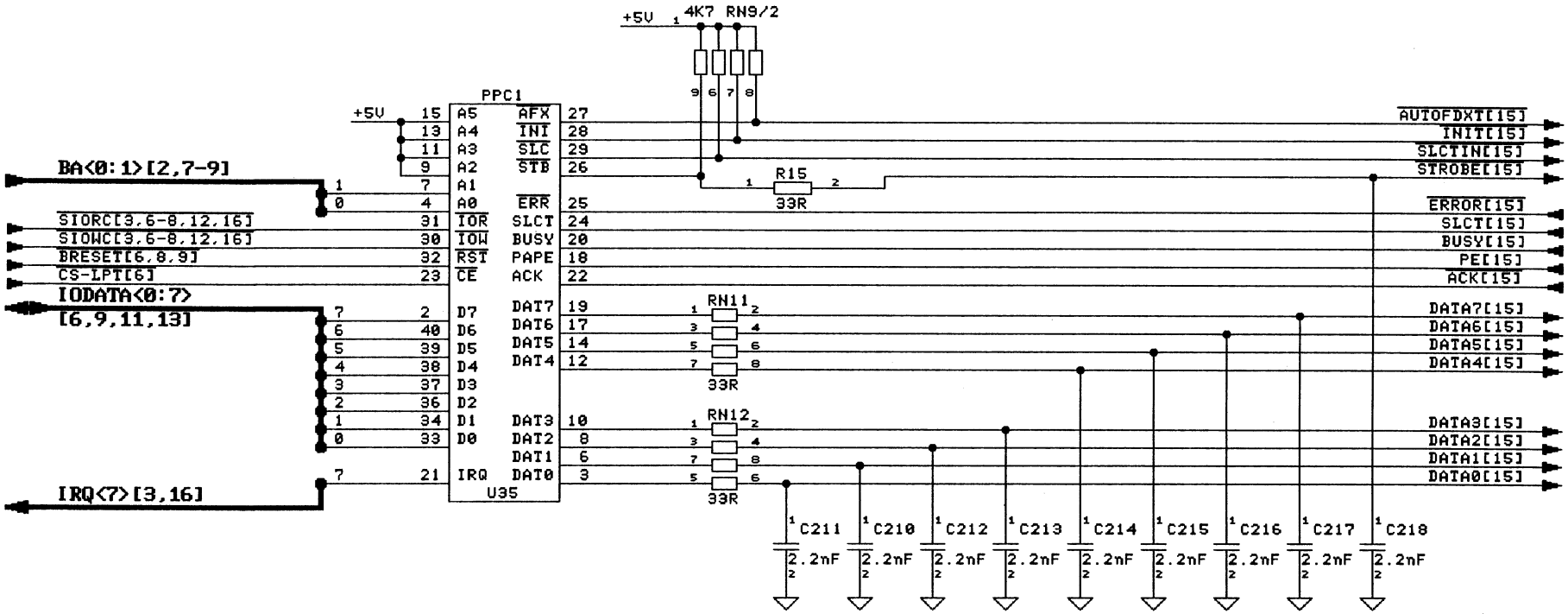


EPC_79

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 9 of 17		

16

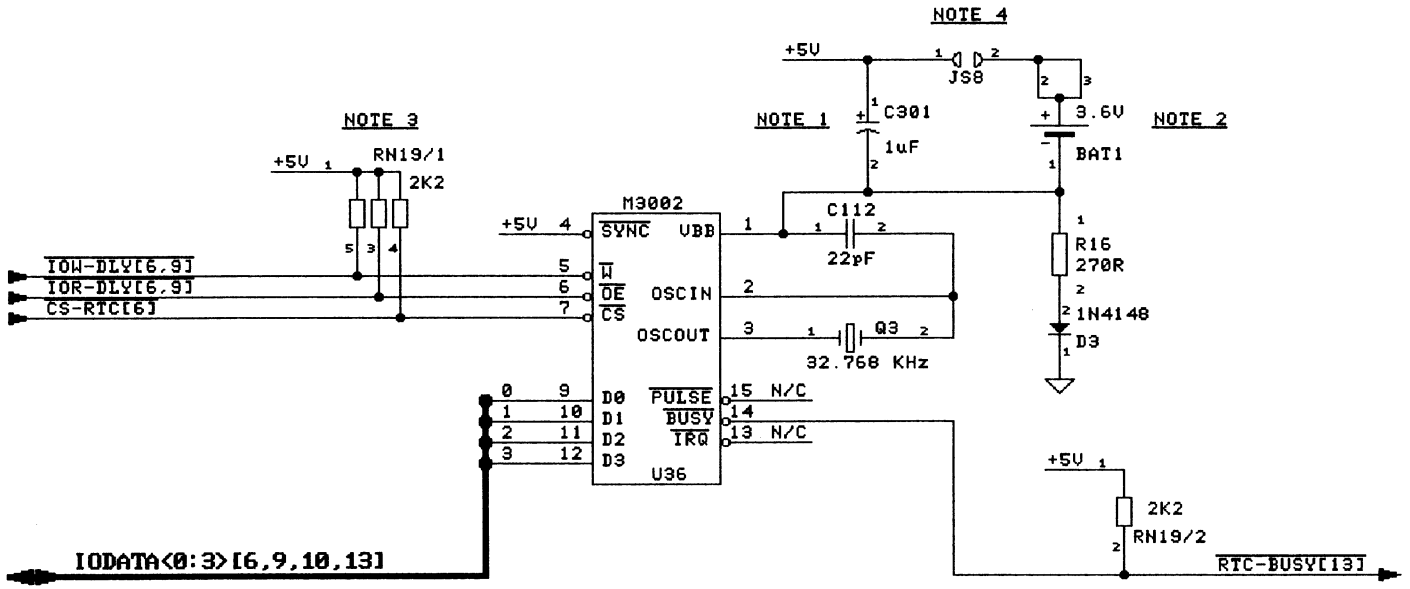
PARALLEL INTERFACE



EPC_710

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-24-88	SHEET: 10 of 17		

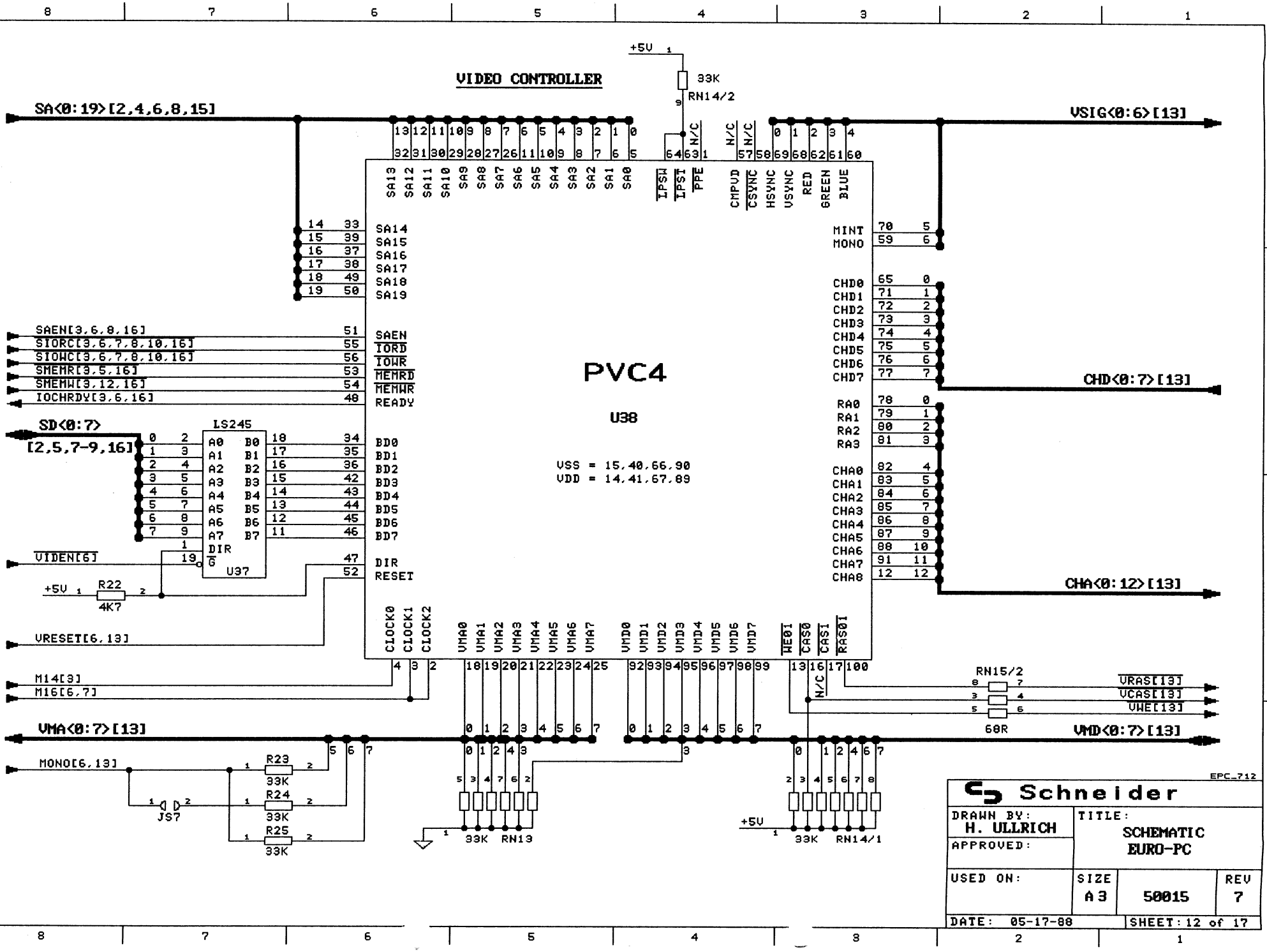
REAL TIME CLOCK



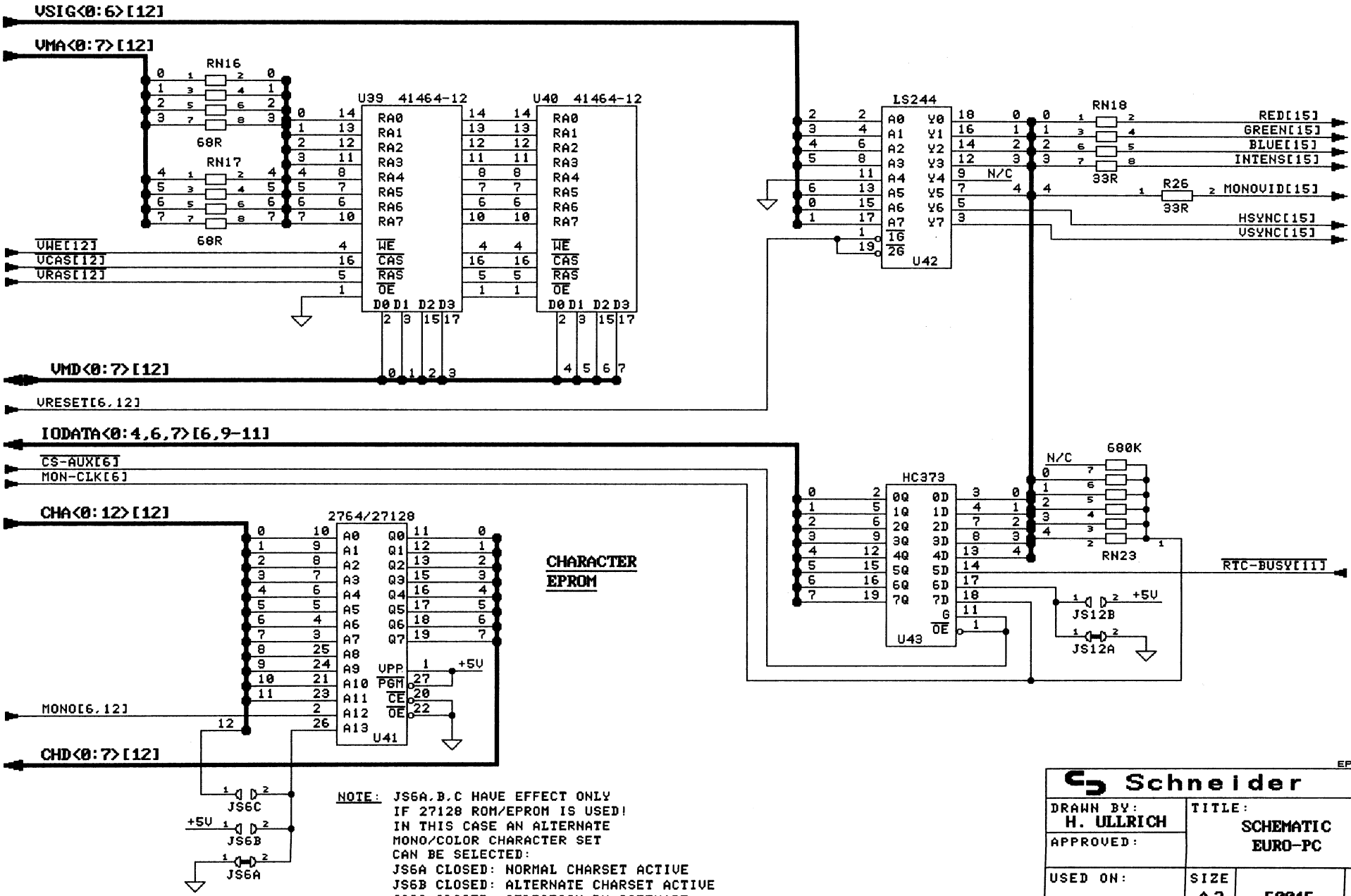
NOTES: 1) C301 IS A TANTAL TYPE
IT IS ONLY ASSEMBLED IF REQUIRED.
2) BAT1 IS A NiCd ACCU WITH 60mAh CAPACITY
3) RN19 ONLY ASSEMBLED IF REQUIRED
4) JS8 MUST BE CLOSED AFTER ASSEMBLY OF BAT1

EPC_711

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 11 of 17		


VIDEO CONTROLLER
PVC4
U38
VSS = 15,40,66,90
VDD = 14,41,67,89
+5V
33K
RN14/2
SA<0:19>[2,4,6,8,15]
VSIG<0:6>[13]
SA13 SA12 SA11 SA10 SA9 SA8 SA7 SA6 SA5 SA4 SA3 SA2 SA1 SA0
IPSW IPST PPE CMPVD CSYNC HSYNC VSYNC RED GREEN BLUE
SA14 SA15 SA16 SA17 SA18 SA19
SAEN
IORD
IOWR
MEMRD
MEMWR
READY
MINT MONO
CHD0 CHD1 CHD2 CHD3 CHD4 CHD5 CHD6 CHD7
CHD<0:7>[13]
RA0 RA1 RA2 RA3
CHA0 CHA1 CHA2 CHA3 CHA4 CHA5 CHA6 CHA7 CHA8
CHA<0:12>[13]
SAEN[3,6,8,16]
SIORC[3,6,7,8,10,16]
SIOWC[3,6,7,8,10,16]
SMEMR[3,5,16]
SMEMW[3,12,16]
IOCHRDY[3,6,16]
SD<0:7>
[2,5,7-9,16]
LS245
A0 A1 A2 A3 A4 A5 A6 A7
B0 B1 B2 B3 B4 B5 B6 B7
DIR
G
U37
BD0 BD1 BD2 BD3 BD4 BD5 BD6 BD7
DIR
RESET
VIDEN[6]
R22
4K7
VRESET[6,13]
CLOCK0 CLOCK1 CLOCK2
VMA0 VMA1 VMA2 VMA3 VMA4 VMA5 VMA6 VMA7
VMD0 VMD1 VMD2 VMD3 VMD4 VMD5 VMD6 VMD7
WE01 CAS0 CAS1 RAS01
M14[3]
M16[6,7]
RN15/2
VRAS[13]
VCAS[13]
VWE[13]
68R
VMA<0:7>[13]
VMD<0:7>[13]
MONO[6,13]
R23
R24
R25
33K
JS7
RN13
RN14/1
EPC_712
Schneider
DRAWN BY: H. ULLRICH
APPROVED:
TITLE: SCHEMATIC EURO-PC
USED ON:
SIZE A3
50015
REV 7
DATE: 05-17-88
SHEET: 12 of 17

VIDEO RAM, CHARACTER EPROM, VIDEO BUFFER



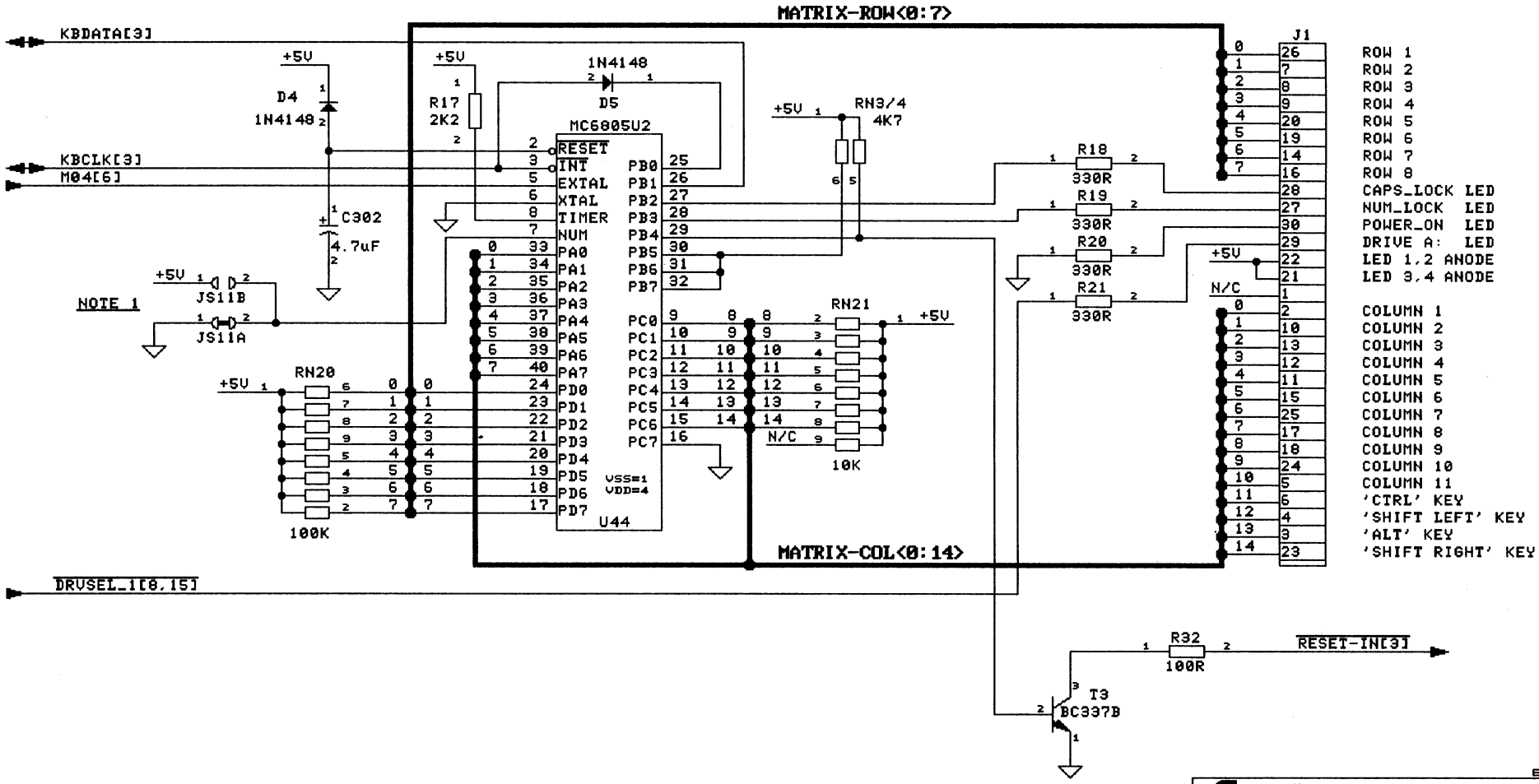
NOTE: JS6A,B,C HAVE EFFECT ONLY
IF 27128 ROM/EPROM IS USED!
IN THIS CASE AN ALTERNATE
MONO/COLOR CHARACTER SET
CAN BE SELECTED:
JS6A CLOSED: NORMAL CHARSET ACTIVE
JS6B CLOSED: ALTERNATE CHARSET ACTIVE
JS6C CLOSED: SELECTION BY SOFTWARE

EPC_713

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 13 of 17		

20

KEYBOARD CONTROLLER

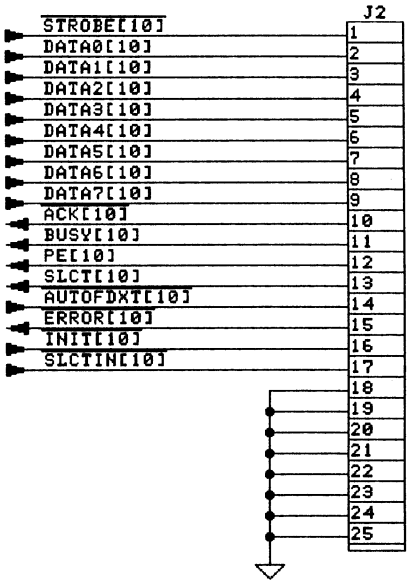


NOTES: 1) JS11A CLOSED, JS11B OPEN FOR MC6805U2 ROM VERSION
JS11A OPEN, JS11B CLOSED FOR MC68705U3 EPROM VERSION

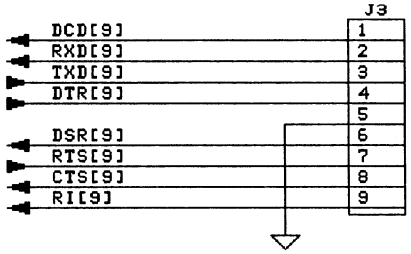
EPC_714

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 14 of 17		

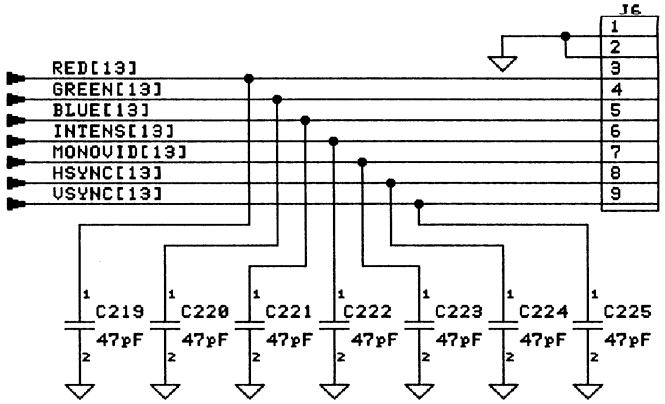
PARALLEL PORT
25 PIN SUBD CONN. FEM.



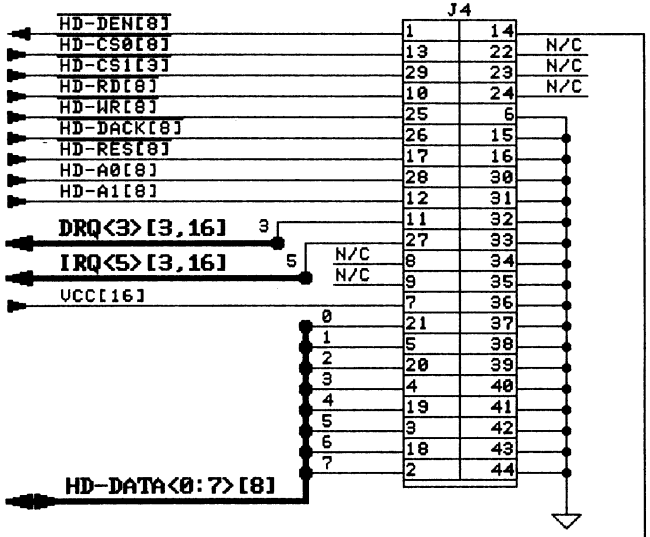
SERIAL PORT
9 PIN SUBD CONN. MALE



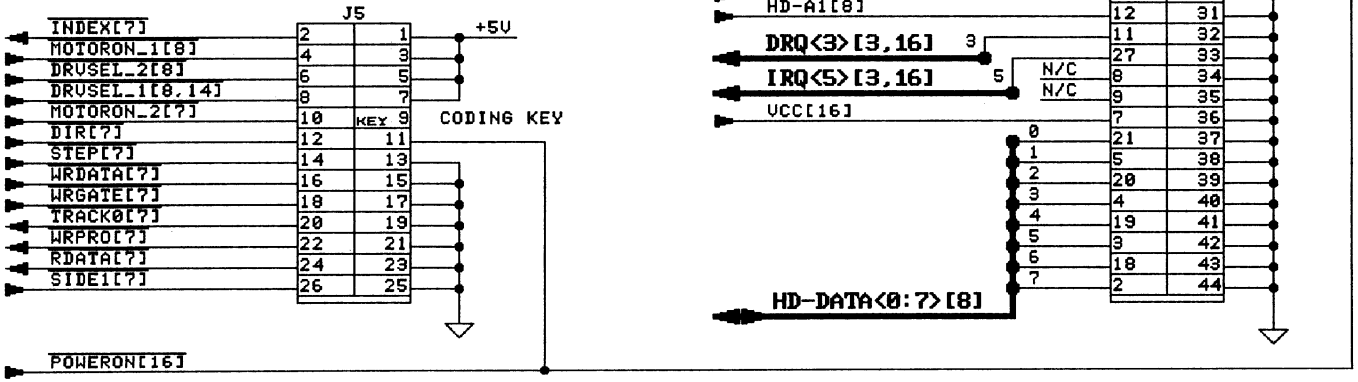
VIDEO MONO/RGB
9 PIN SUBD FEMALE



EXTERNAL HARDDISK DRIVE
44 PIN MICRO-D CONN. FEMALE



INTERNAL AND EXTERNAL FLOPPY DRIVE
HEADER ASSY DUAL ROW 26 PIN

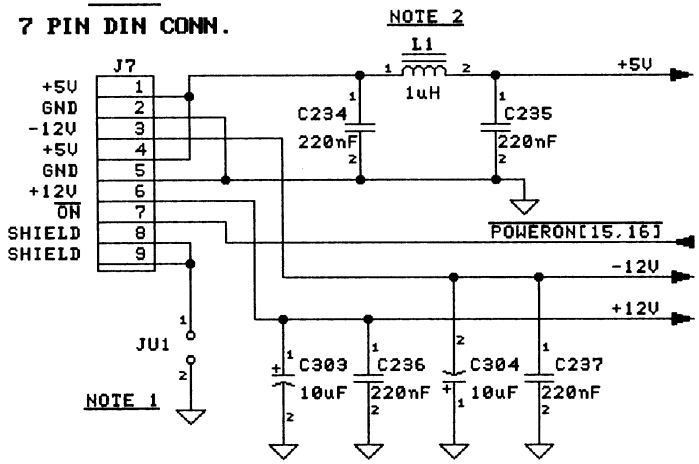


CONNECTORS #1

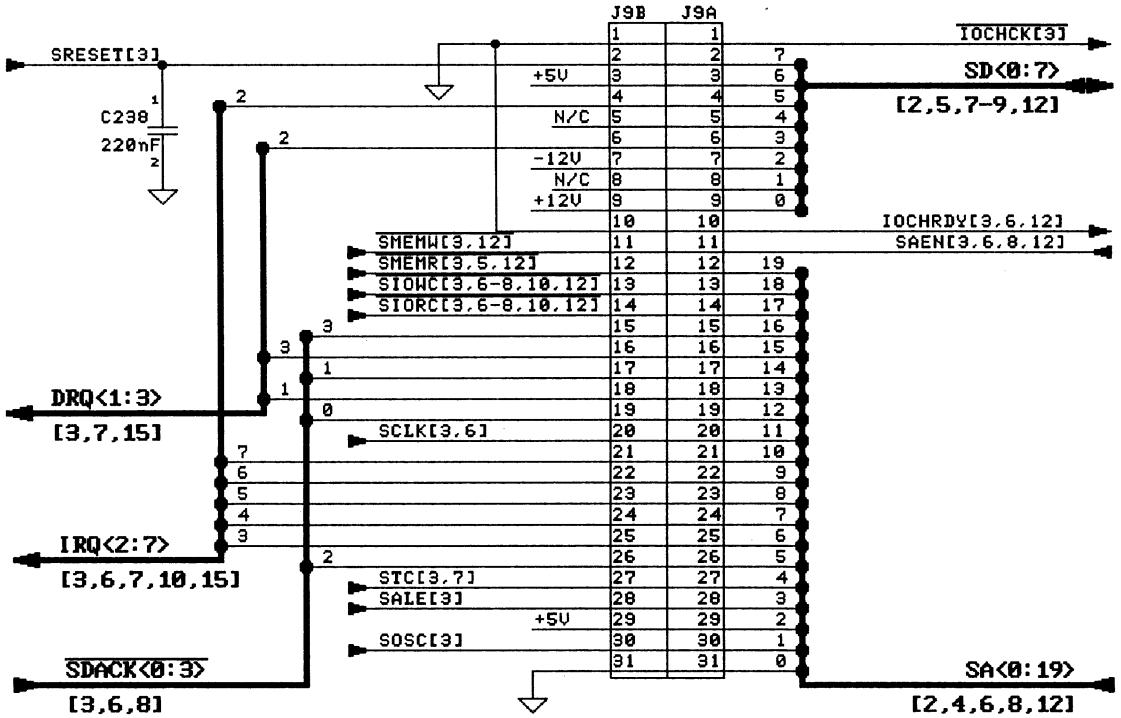
EPC_715

Schneider		
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC	
APPROVED:		
USED ON:	SIZE A3	REV 7
DATE: 05-17-88	50015	SHEET: 15 of 17

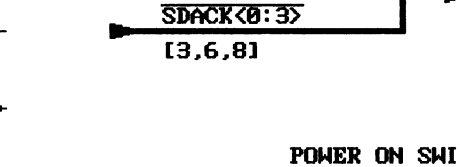
POWER
7 PIN DIN CONN.



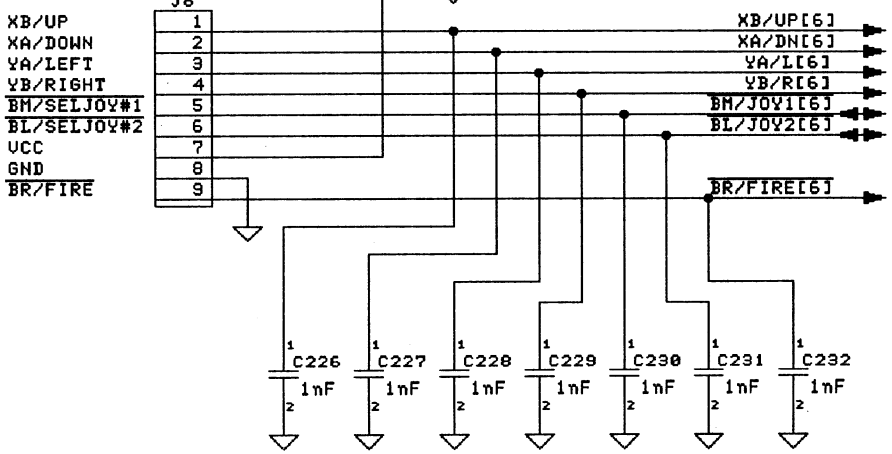
EXPANSION-SLOT
62 PIN CARDEDGE CONN.



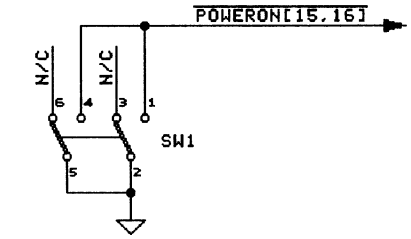
CURRENT LIMITING PTC



MOUSE/JOYSTICK
9 PIN SUBD MALE



POWER ON SWITCH



NOTES:
1) JU1 CONNECTS SHIELD TO GND IF NECESSARY. IF NO WIRE JUMPER IS INSTALLED, A RESISTOR >=100K SHOULD BE PROVIDED INSTEAD FOR STATIC DISCHARGE
2) L1 NORMALLY SUBSTITUTED BY A WIRE JUMPER

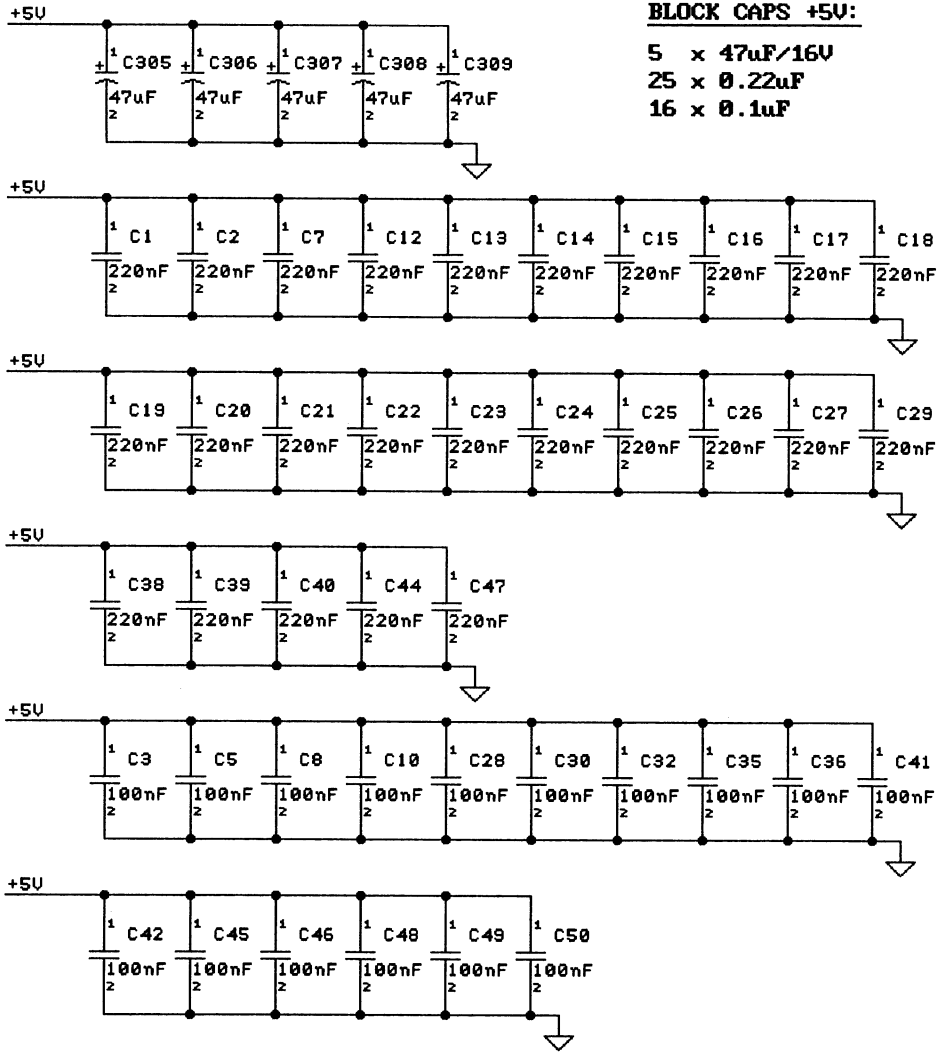
CONNECTORS #2

EPC_716

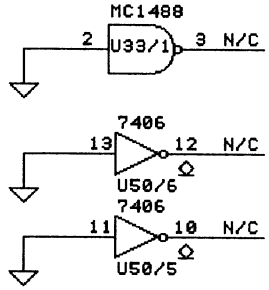
Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 16 of 17		

BLOCK CAPS +5V:

5 x 47uF/16V
25 x 0.22uF
16 x 0.1uF



SPARE GATES:



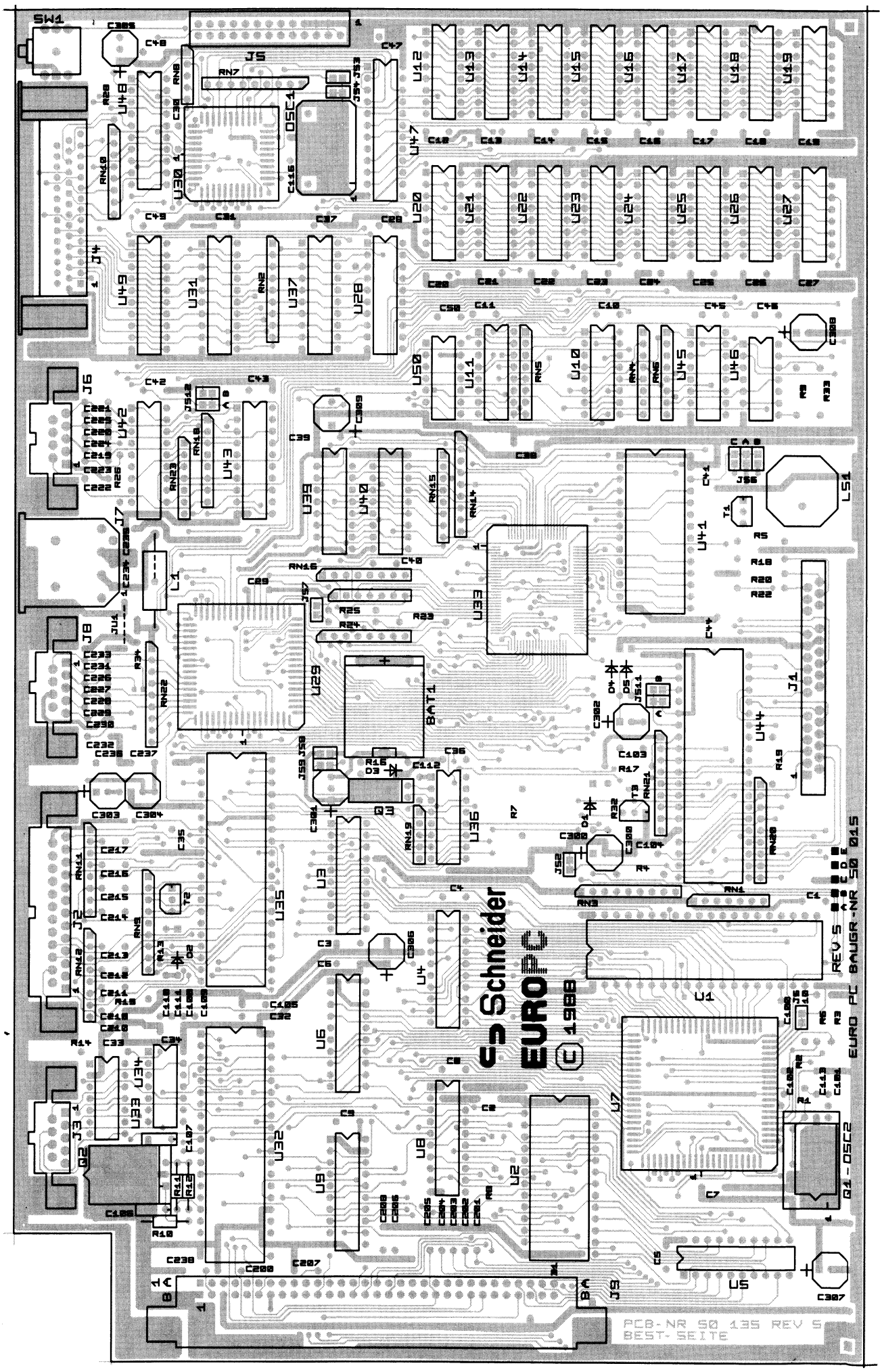
BLOCK CAPS, SPARE GATES

EPC-717

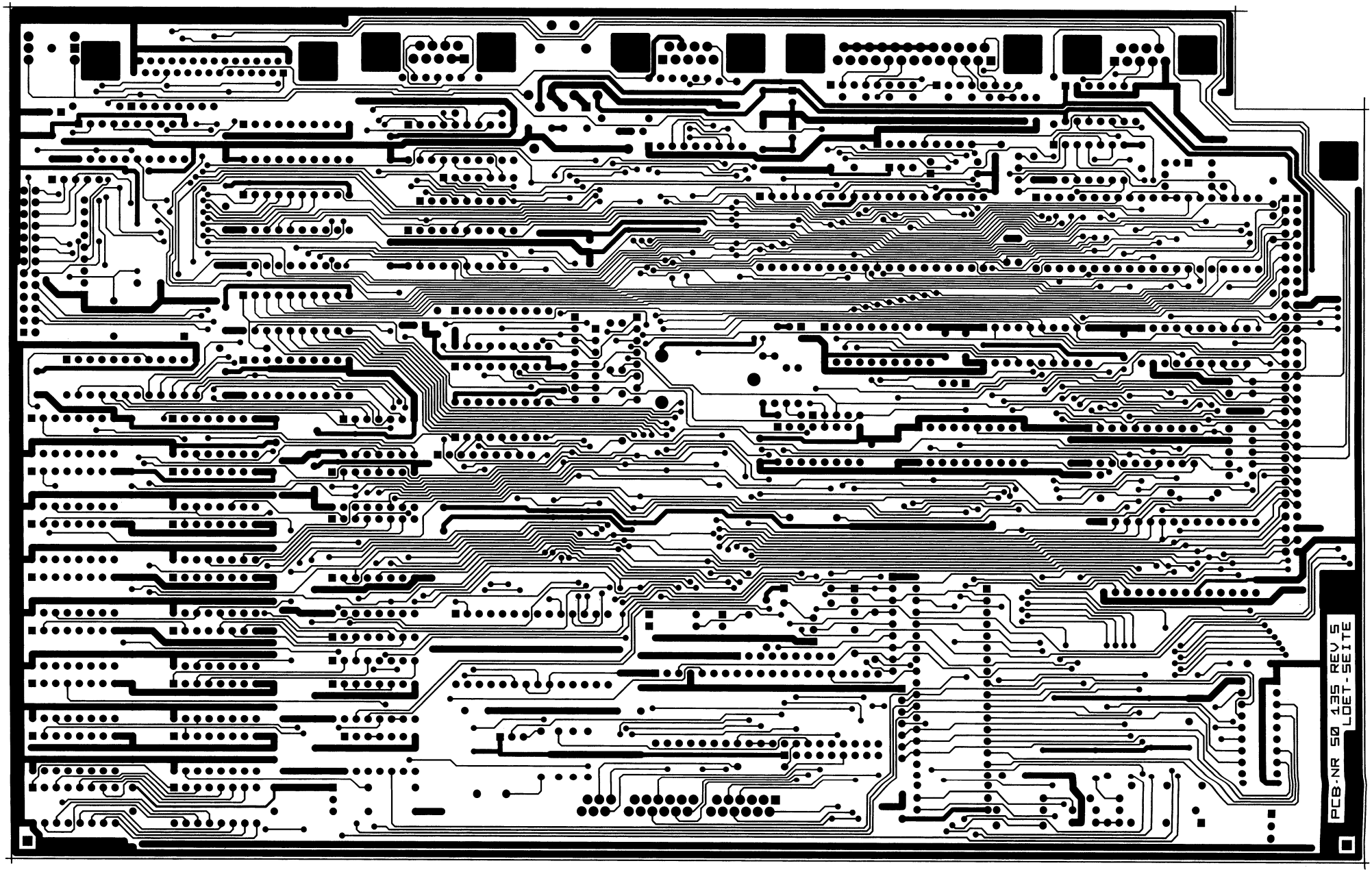
Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 7
DATE: 05-17-88	SHEET: 17 of 17		

24

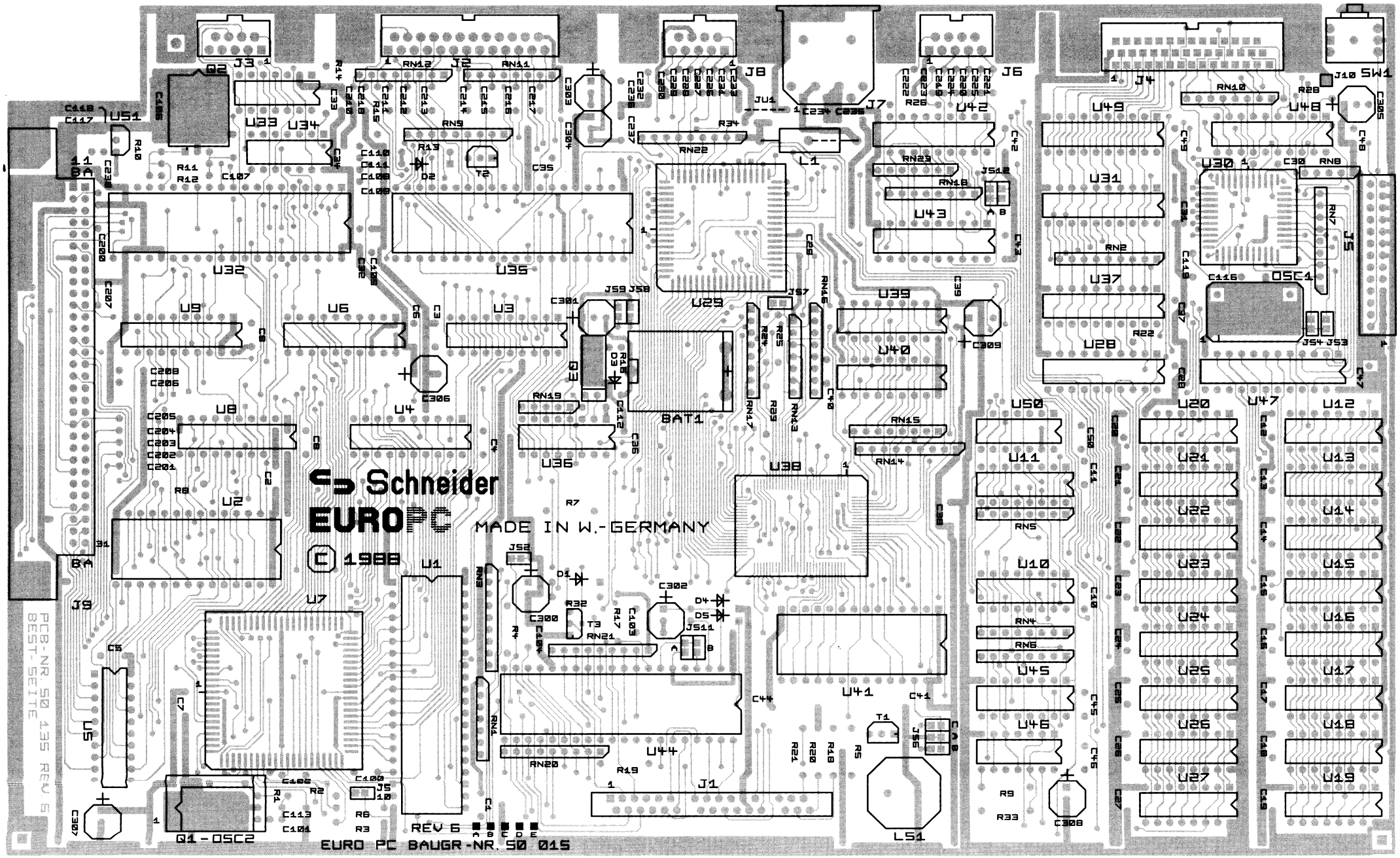
Component side
Rev. 5



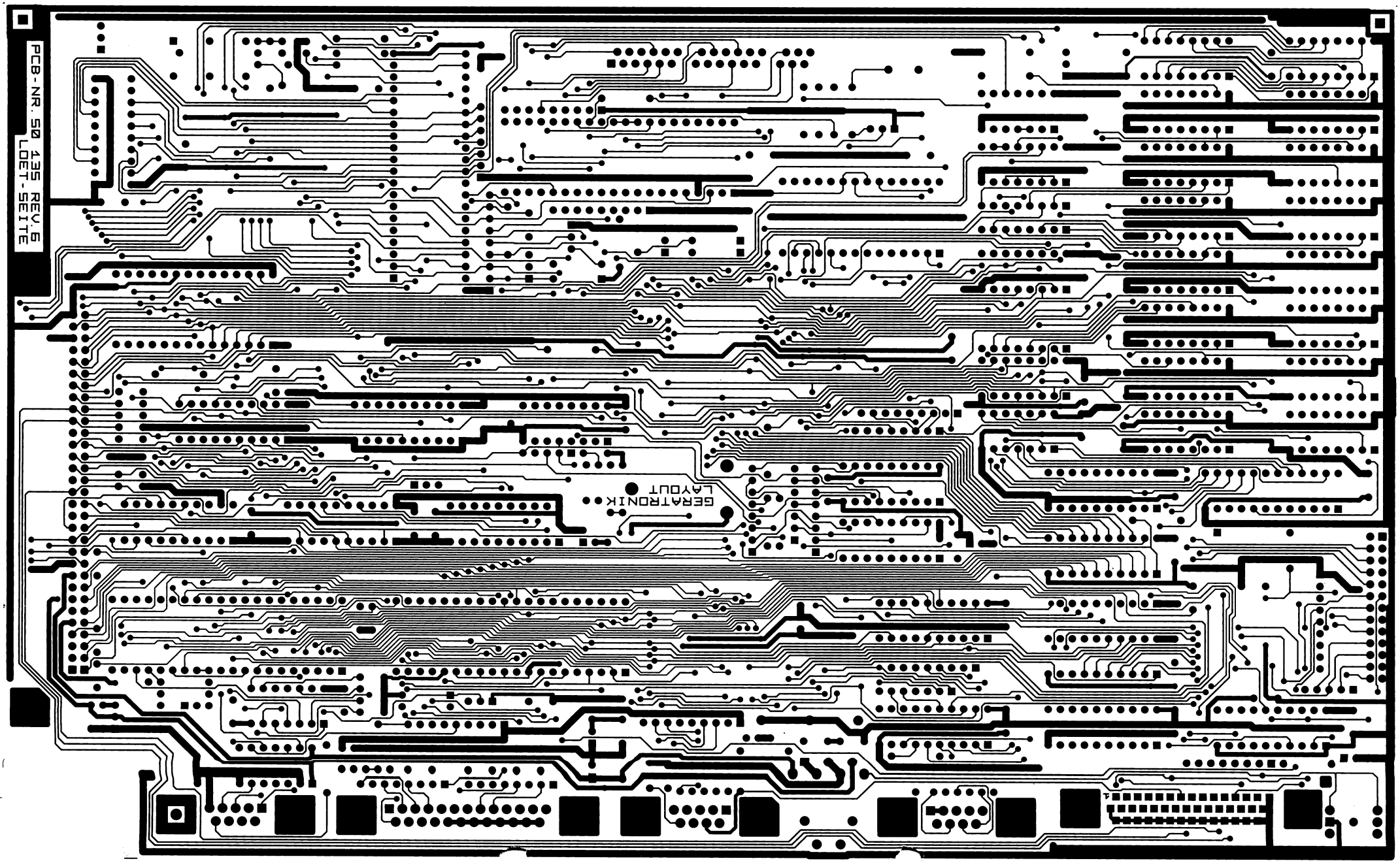
Soldering side
Rev. 5



Component side
Rev. 6



Soldering side
Rev. 6



Ersatzteilliste für Systemeinheit Euro PC
Parts List for System Unit Euro PC

Best.-Nr. Part.-No.	Bezeichnung	Description	Zeich.-Pos. Ref.-No.	Preisgruppe
IC				
50 100 00	IC SAB 80 88-1-P	IC SAB 80 88-1-P	U 1	C 9
50 111 00	IC 27256-17	IC 27256-17	U 2	C 9
50 124 00	IC 74F245	IC 74F245	U 3	A 7
50 130 00	IC 74LS373	IC 74LS373	U 4–U 6	A 7
50 103 00	IC FE2010A-ES	IC FE2010A-ES	U 7	E 3
26 354 00	IC 74LS244	IC 74LS244	U 8, U 9	B 0
50 127 00	IC 74LS158	IC 74LS158	U 10, U 11	A 7
50 109 00	IC 41256-12	IC 41256-12	U 12–U 27	D 0
50 124 00	IC 74F245	IC 74F245	U 28	A 7
50 101 00	IC JIM TC17G022AT	IC JIM TC17G022AT	U 29	D 0
50 105 00	IC WD37C65A-JM00	IC WD37C65A-JM00	U 30	D 5
34 772 00	IC 74LS245	IC 74LS245	U 31	B 0
50 107 00	IC WD8250-PL00	IC WD8250-PL00	U 32	C 4
50 120 00	IC MC1488P	IC MC1488P	U 33	A 5
50 121 00	IC MC1489P	IC MC1489P	U 34	A 5
50 106 00	IC PPC1	IC PPC1	U 35	C 3
50 108 00	IC M3002	IC M3002	U 36	C 3
34 772 00	IC 74LS245	IC 74LS245	U 37	B 0
50 104 00	IC PVC4	IC PVC4	U 38	E 5
50 110 00	IC 41464-12	IC 41464-12	U 39, U 40	D 4
50 146 00	IC 64K ROM 200nS (D)	IC 64K ROM 200nS (D)	U 41	C 3
26 354 00	IC 74LS244	IC 74LS244	U 42	B 0
50 125 00	IC 74HC373	IC 74HC373	U 43	A 7
50 102 00	IC MC6805U2	IC MC6805U2	U 44	C 3
50 127 00	IC 74LS158	IC 74LS158	U 45	A 7
40 918 00	IC 74F00	IC 74F00	U 46	A 5
50 119 00	IC PAL20L8A	IC PAL20L8A	U 47	C 2
26 354 00	IC 74LS244	IC 74LS244	U 48	B 0
34 772 00	IC 74LS245	IC 74LS245	U 49	B 0
15 241 00	IC 7406	IC 7406	U 50	A 7
50 711 00	IC 64K ROM 200nS (P)	IC 64K ROM 200nS (P)	U 41	C 3
50 712 00	IC 64K ROM 200nS (GR)	IC 64K ROM 200nS (GR)	U 41	C 3
50 713 00	IC 64K ROM 200nS (DK/N)	IC 64K ROM 200nS (DK/N)	U 41	C 3

Note: All spare parts with countryindex are reserved for foreign distributors only.

All 3.5″ and 5.25″ floppydisks must be replaced by new ones. Schneider passes no exchange price to the distributor or dealer.

Ersatzteilliste für Systemeinheit Euro PC
Parts List for System Unit Euro PC

Best.-Nr. Part.-No.	Bezeichnung	Description	Zeich.-Pos. Ref.-No.	Preisgruppe
Verschiedenes/Miscellaneous				
10 801 00	Transistor BC327B		T 1	A 6
10 802 00	Transistor BC337B		T 2, T 3	A 6
11 241 00	Diode 1IV4148		D 1–D 5	A 2
44 671 00	Quarz 28,636 MHz HC-18U		Q 1	C 3
44 672 00	Quarz 1,8432 MHz HC-18U		Q 2	B 5
44 673 00	Quarz 32,768 kHz		Q 3	A 7
44 674 00	Oszillator 16 MHz		OSC 1	C 3
45 066 00	Oszillator 28,6 MHz			
44 675 00	Widerstand/Netzwerk 6 × 4K7	R Network 6 × 4K7	RN 1	A 3
44 676 00	Widerstand/Netzwerk 8 × 4K7	R Network 8 × 4K7	RN 2, RN 3	A 3
44 677 00	Widerstand/Netzwerk 4 × 68R	R Network 4 × 68R	RN 4, RN 6	A 3
44 676 00	Widerstand/Netzwerk 8 × 4K7	R Network 8 × 4K7	RN 7	A 3
44 678 00	Widerstand/Netzwerk 4 × 1K	R Network 4 × 1K	RN 8	A 3
44 676 00	Widerstand/Netzwerk 8 × 4K7	R Network 8 × 4K7	RN 9	A 3
44 677 00	Widerstand/Netzwerk 4 × 68R	R Network 4 × 68R	RN 10	A 3
44 679 00	Widerstand/Netzwerk 4 × 33R	R Network 4 × 33R	RN 11, RN 12	A 3
44 680 00	Widerstand/Netzwerk 6 × 33K	R Network 6 × 33K	RN 13	A 3
44 681 00	Widerstand/Netzwerk 8 × 33K	R Network 8 × 33K	RN 14	A 3
44 677 00	Widerstand/Netzwerk 4 × 68R	R Network 4 × 68R	RN 15–RN 17	A 3
44 679 00	Widerstand/Netzwerk 4 × 33R	R Network 4 × 33R	RN 18	A 3
44 682 00	Widerstand/Netzwerk 4 × 2K2	R Network 4 × 2K2	RN 19	A 3
44 683 00	Widerstand/Netzwerk 8 × 100K	R Network 8 × 100K	RN 20	A 3
44 684 00	Widerstand/Netzwerk 8 × 10K	R Network 8 × 10K	RN 21, RN 22	A 3
44 685 00	Widerstand/Netzwerk 6 × 680K	R Network 6 × 680K	RN 23	A 3
44 686 00	PTC PCL 0250.0	PTC PCL 0250.0	R 34	A 9
44 687 00	Spule 1 µH	Coil 1 µH	L 1	A 7
44 688 00	Schalter 2 × Um	Switch	SW 1	B 0
44 689 00	Batterie 3,6 V	Battery 3.6 V	BAT 1	B 9
44 690 00	Piepser	Buzzer	LS 1	A 9
50 137 00	Stecker FPC 30pol.	Socket FPC	J 1	B 5
50 133 00	Buchse SUB-D 25pol.	Socket SUB-D	J 2	B 2
50 131 00	Stecker SUB-D 9pol.	Socket SUB-D	J 3, J 8	A 9
50 134 00	Buchse HDD 22 44pol.	Socket HDD 22	J 4	C 7
50 139 00	Stift sterker 2 × 13pol.	Socket	J 5	A 7
50 132 00	Buchse SUB-D 9pol.	Socket SUB-D	J 6	B 0
50 140 00	Buchse DIN 7pol.	Jack DIN	J 7	A 8
50 138 00	Stecker 2 × 31pol.	Socket	J 9	C 1

CAUTION:

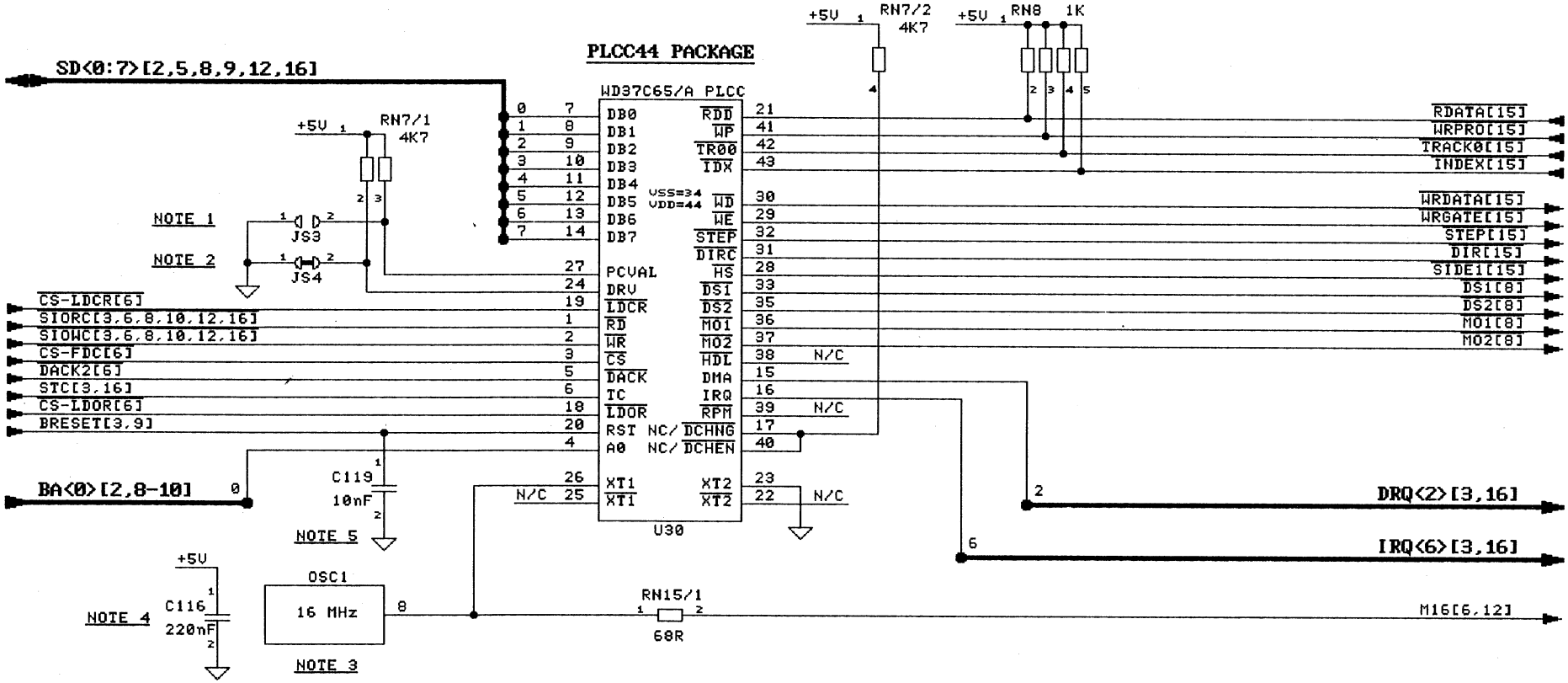
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

Ref.: IEC/74 (Central Office) 104.

Euro PC Appendix A:

Different schematics Rev. 7 – Rev. 8

FLOPPY DISK CONTROLLER

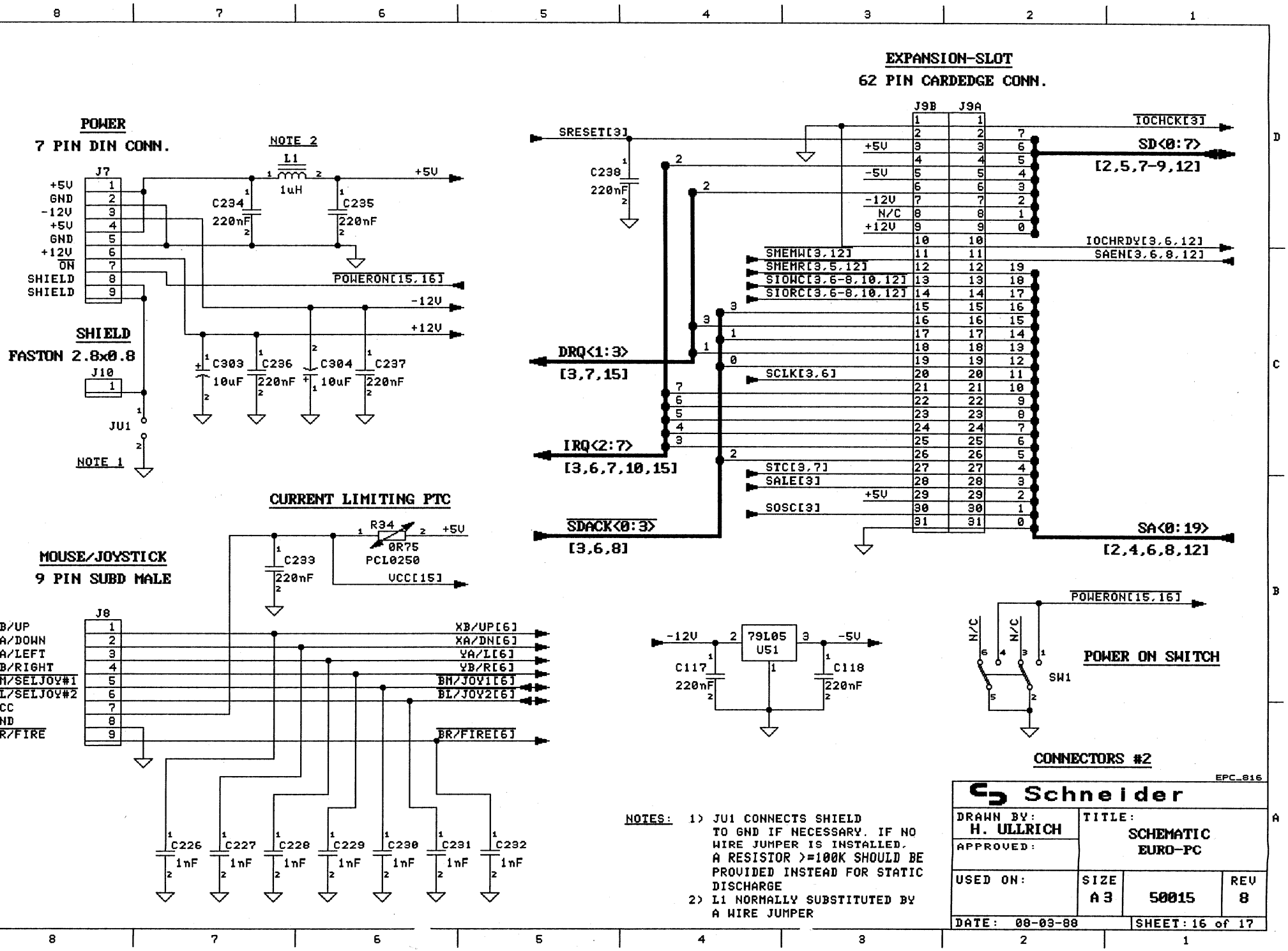


NOTES: 1) JS3 SELECTS WRITE PRECOMP. VAL.:
JS3 OPEN : 125 ns
JS3 CLOSED: 187 ns
2) JS4 SELECTS 2 SPEED SPINDLE DRIVE
IF CLOSED
3) OSCILLATOR +- 100 ppm, CMOS OUTPUT
4) C116 IS BLOCK CAP FOR OSC1
5) C119 IS REQUIRED FOR WD37C65A/B TYPE
FDC CONTROLLERS, LOCATED NEAR U30.

EPC_87

Schneider

DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC		
APPROVED:			
USED ON:	SIZE A3	50015	REV 8
DATE: 08-02-88	SHEET: 7 of 17		


POWER
7 PIN DIN CONN.
NOTE 2
L1
1uH
J7
+5V
GND
-12V
+5V
GND
+12V
ON
SHIELD
SHIELD
C234
220nF
C235
220nF
+5V
POWERON[15,16]
-12V
+12V
C303
10uF
C236
220nF
C304
10uF
C237
220nF
SHIELD
FASTON 2.8x0.8
J10
JU1
NOTE 1
EXPANSION-SLOT
62 PIN CARDEDGE CONN.
J9B
J9A
SRESET[3]
C238
220nF
+5V
-5V
-12V
N/C
+12V
IOCHCK[3]
SD<0:7>
[2,5,7-9,12]
IOCHRDY[3,6,12]
SAEN[3,6,8,12]
SMEMW[3,12]
SMEMR[3,5,12]
SIOWC[3,6-8,10,12]
SIORC[3,6-8,10,12]
DRQ<1:3>
[3,7,15]
SCLK[3,6]
IRQ<2:7>
[3,6,7,10,15]
STC[3,7]
SALE[3]
+5V
SOSC[3]
SDACK<0:3>
[3,6,8]
SA<0:19>
[2,4,6,8,12]
CURRENT LIMITING PTC
R34
0R75
PCL0250
+5V
C233
220nF
VCC[15]
MOUSE/JOYSTICK
9 PIN SUBD MALE
J8
XB/UP
XA/DOWN
YA/LEFT
YB/RIGHT
BM/SELJOY#1
BL/SELJOY#2
VCC
GND
BR/FIRE
XB/UP[6]
XA/DN[6]
YA/L[6]
YB/R[6]
BM/JOY1[6]
BL/JOY2[6]
BR/FIRE[6]
C226
1nF
C227
1nF
C228
1nF
C229
1nF
C230
1nF
C231
1nF
C232
1nF
-12V
79L05
U51
-5V
C117
220nF
C118
220nF
POWERON[15,16]
N/C
N/C
SW1
POWER ON SWITCH
CONNECTORS #2
NOTES: 1) JU1 CONNECTS SHIELD TO GND IF NECESSARY. IF NO WIRE JUMPER IS INSTALLED, A RESISTOR >=100K SHOULD BE PROVIDED INSTEAD FOR STATIC DISCHARGE
2) L1 NORMALLY SUBSTITUTED BY A WIRE JUMPER
EPC_816
Schneider
DRAWN BY: H. ULLRICH
APPROVED:
TITLE: SCHEMATIC EURO-PC
USED ON:
SIZE A3
50015
REV 8
DATE: 08-03-88
SHEET: 16 of 17

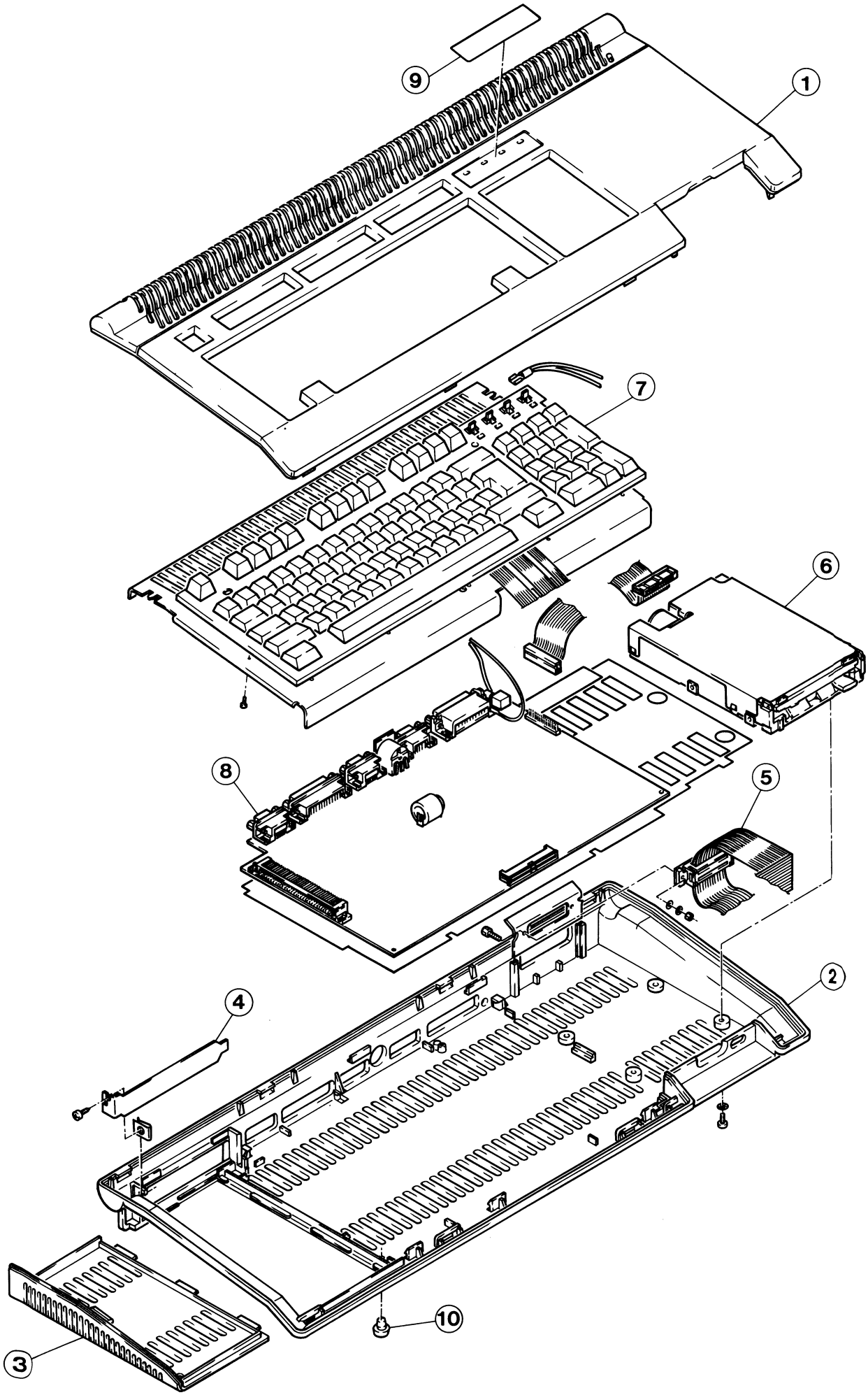
Kundendienst-Handbuch
Service Manual

Schneider

SYSTEMEINHEIT
EURO PC II

Ident-Nr.: 43412

Exploded view

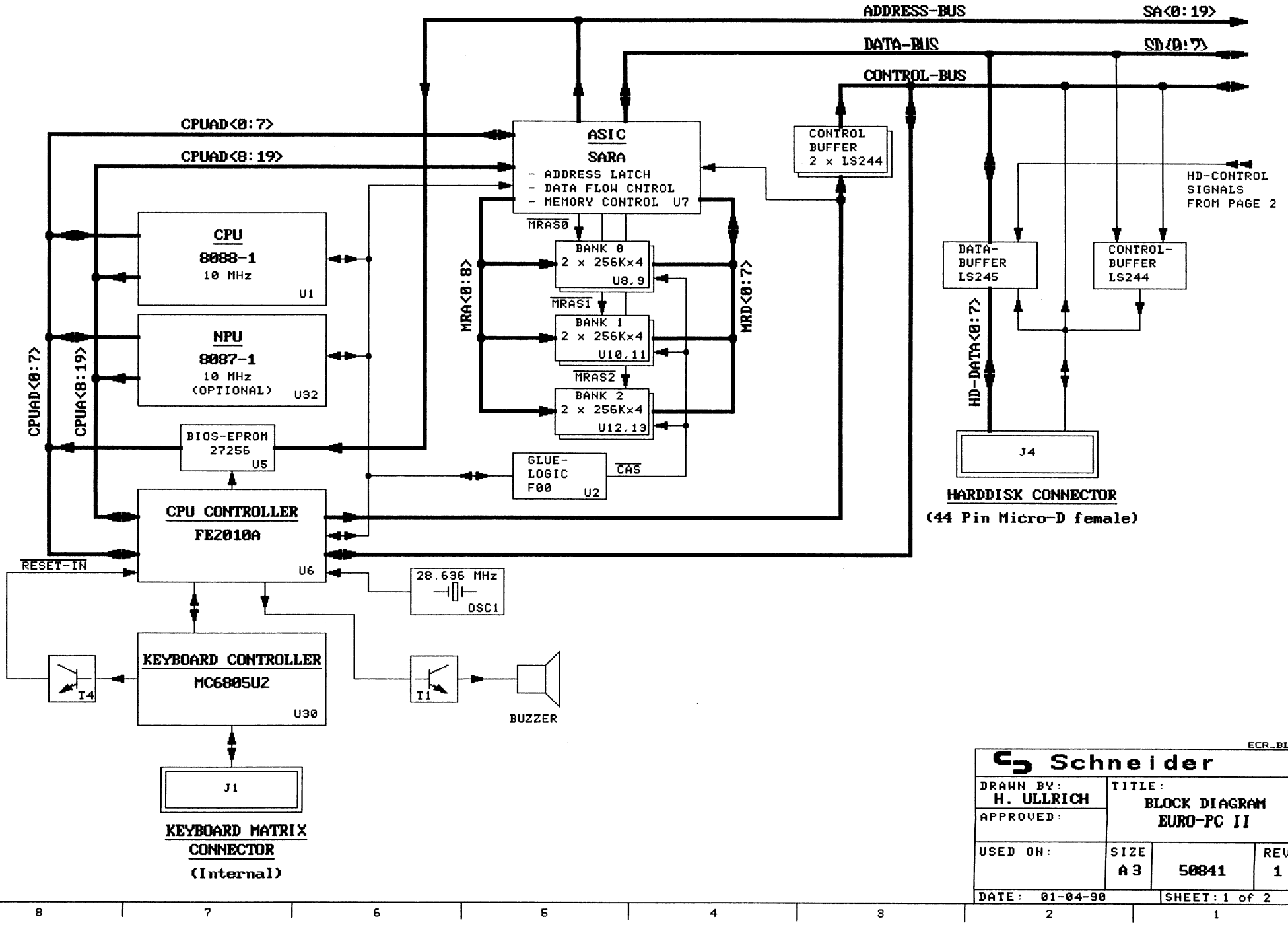


Ersatzteilliste für Systemeinheit Euro PC II
Parts List for System Unit Euro PC II

Best.-Nr. Part.-No.	Bezeichnung	Description	Zeich.-Pos. Ref.-No.	Preisgruppe
50 058 00	Styropor Euro PC	Polyfoam		B 7
51 617 00	Faltkarton Euro PC	Gift box		B 7
51 509 00	Gehäuseoberteil	Cabinet, top	1	C 7
50 842 00	Gehäuseboden	Cabinet, bottom	2	C 6
50 012 00	Gehäuseklappe	Cabinet, door	3	B 4
50 020 00	Blindblech	Plate, blind	4	A 7
50 018 00	Kabelbaum FDD	Cord FDD	5	C 5
50 017 00	Floppylaufwerk	Floppy disk drive	6	G 1
50 056 00	Druckknopf für Floppy (Toshiba)	Push-button, Floppy (Toshiba)		A 5
50 294 00	Druckknopf für Floppy (Sony)	Push-button, Floppy (Sony)		A 5
50 016 00	Tastatur (D)	Switch keyboard (D)	7	E 5
50 148 00	Tastatur (F)	Switch keyboard (F)		E 5
50 149 00	Tastatur (GB)	Switch keyboard (GB)		E 5
50 161 00	Tastatur (CH)	Switch keyboard (CH)		E 5
50 162 00	Tastatur (DK)	Switch keyboard (DK)		E 5
50 163 00	Tastatur (E)	Switch keyboard (E)		E 5
50 165 00	Tastatur (N)	Switch keyboard (N)		E 5
50 166 00	Tastatur (S/SF)	Switch keyboard (S/SF)		E 5
50 565 00	Tastatur (TR)	Switch keyboard (TR)		E 5
50 566 00	Tastatur (P)	Switch keyboard (P)		E 5
50 567 00	Tastatur (GR)	Switch keyboard (GR)		E 5
52 182 00	Tastatur (SU)	Switch keyboard (SU)		E 5
52 183 00	Tastatur (UAE)	Switch keyboard (UAE)		E 5
50 841 00	Platine CPU	CPU-board	8	J 3
50 014 00	Klebeschild	Sheet	9	A 6
50 141 00	Gehäusefuß	Leg, cabinet		A 2
50 023 00	Typenschild	Sheet, rating		A 3
50 850 00	Netzteil Euro PC	Power supply		E 3

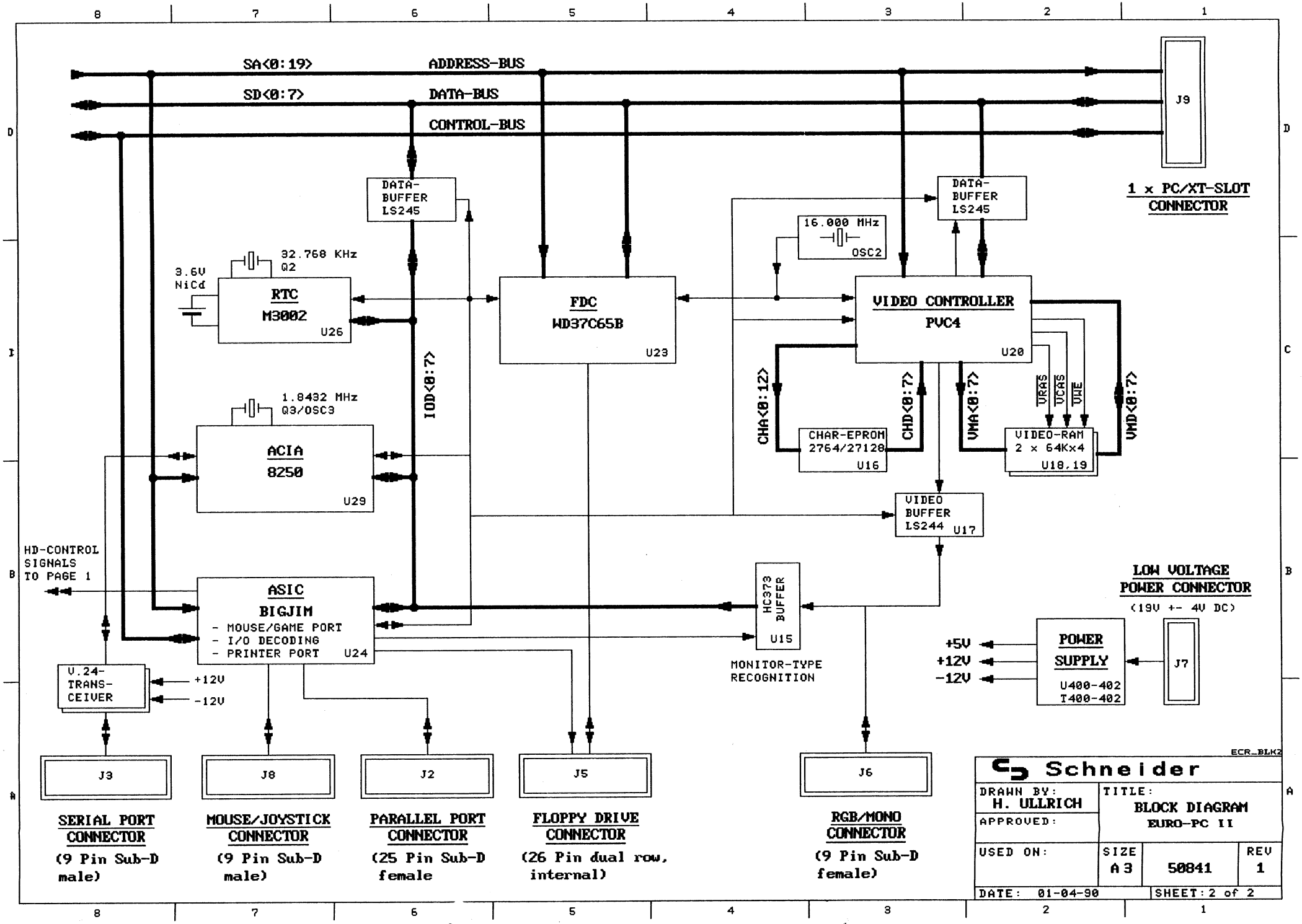
Note: All spare parts with countryindex are reserved for foreign distributors only.

All 3.5″ and 5.25″ floppydisks must be replaced by new ones. Schneider passes no exchange price to the distributor or dealer.



ECR_BLK1

Schneider			
DRAWN BY: H. ULLRICH	TITLE: BLOCK DIAGRAM EURO-PC II		
APPROVED:			
USED ON:	SIZE A3	50841	REV 1
DATE: 01-04-90	SHEET: 1 of 2		


SA<0:19> ADDRESS-BUS
SD<0:7> DATA-BUS
CONTROL-BUS
J9
1 x PC/XT-SLOT CONNECTOR
DATA-BUFFER LS245
DATA-BUFFER LS245
16.000 MHz OSC2
32.768 KHz Q2
3.6V NiCd
RTC M3002 U26
FDC WD37C65B U23
VIDEO CONTROLLER PVC4 U20
IOD<0:7>
CHA<0:12>
CHD<0:7>
VMA<0:7>
VRAS
VCAS
VWE
VMD<0:7>
CHAR-EPROM 2764/27128 U16
VIDEO-RAM 2 x 64Kx4 U18.19
1.8432 MHz Q3/OSC3
ACIA 8250 U29
VIDEO BUFFER LS244 U17
HD-CONTROL SIGNALS TO PAGE 1
ASIC BIGJIM
- MOUSE/GAME PORT
- I/O DECODING
- PRINTER PORT U24
HC373 BUFFER U15
MONITOR-TYPE RECOGNITION
LOW VOLTAGE POWER CONNECTOR
(19V +- 4V DC)
+5V
+12V
-12V
POWER SUPPLY U400-402 T400-402
J7
V.24-TRANS-CEIVER
+12V
-12V
J3
J8
J2
J5
J6
SERIAL PORT CONNECTOR (9 Pin Sub-D male)
MOUSE/JOYSTICK CONNECTOR (9 Pin Sub-D male)
PARALLEL PORT CONNECTOR (25 Pin Sub-D female
FLOPPY DRIVE CONNECTOR (26 Pin dual row, internal)
RGB/MONO CONNECTOR (9 Pin Sub-D female)
ECR_BLK2
Schneider
DRAWN BY: H. ULLRICH
APPROVED:
USED ON:
TITLE: BLOCK DIAGRAM EURO-PC II
SIZE A3
50841
REV 1
DATE: 01-04-90
SHEET: 2 of 2

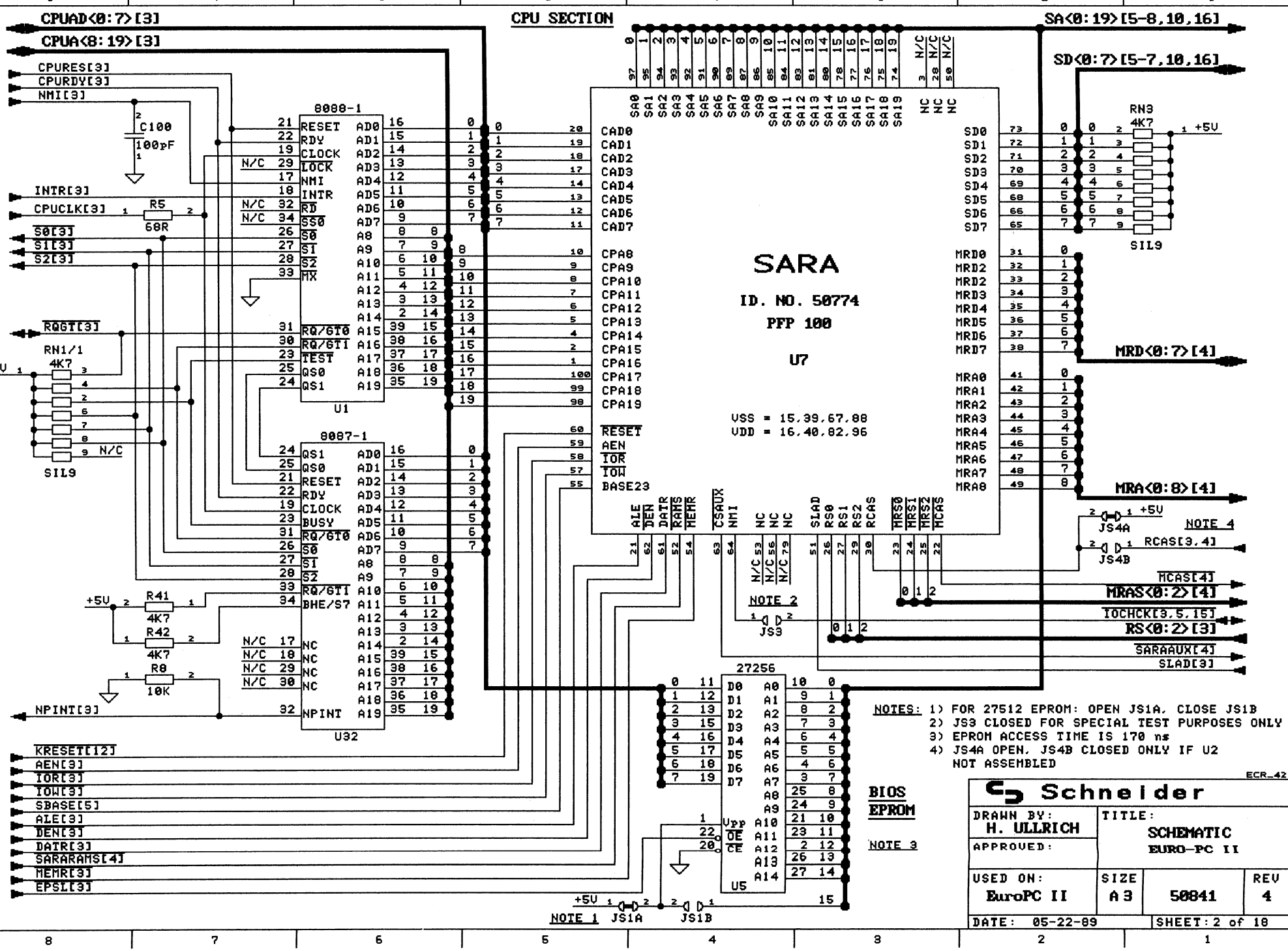
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
1	ADVANCED ENGINEERING RELEASE	03-28-89	H. ULLRICH
2	UPDATE, REV.0 PCB	03-29-89	H. ULLRICH
3	UPDATE, REV.1 PCB, PREPRODUCTION RELEASE	06-05-89	H. ULLRICH
4	REWORK: ADDED R1 ON 'IOCHRDY'. CHANGES IN OVP-CIRCUIT OF PSU	08-29-89	H. ULLRICH

DRAWING FILES:	CONTENTS:
ECR_41.DWG	THIS SHEET
ECR_42.DWG	CPU SECTION, ASIC 'SARA'
ECR_43.DWG	FE2010A SECTION
ECR_44.DWG	768 KB MAIN RAM
ECR_45.DWG	ASIC 'BIGJIM'
ECR_46.DWG	FLOPPY INTERFACE
ECR_47.DWG	HARDDISK INTERFACE
ECR_48.DWG	SERIAL INTERFACE
ECR_49.DWG	REAL TIME CLOCK
ECR_410.DWG	PVC4 VIDEO CONTROLLER
ECR_411.DWG	VIDEO RAM, CHAR. ROM
ECR_412.DWG	KEYBOARD CONTROLLER
ECR_413.DWG	CONNECTORS I
ECR_414.DWG	CONNECTORS II
ECR_415.DWG	CONNECTORS III
ECR_416.DWG	CONNECTORS IV
ECR_417.DWG	BLOCK CAPS
ECR_418.DWG	POWER SUPPLY

ECR_41

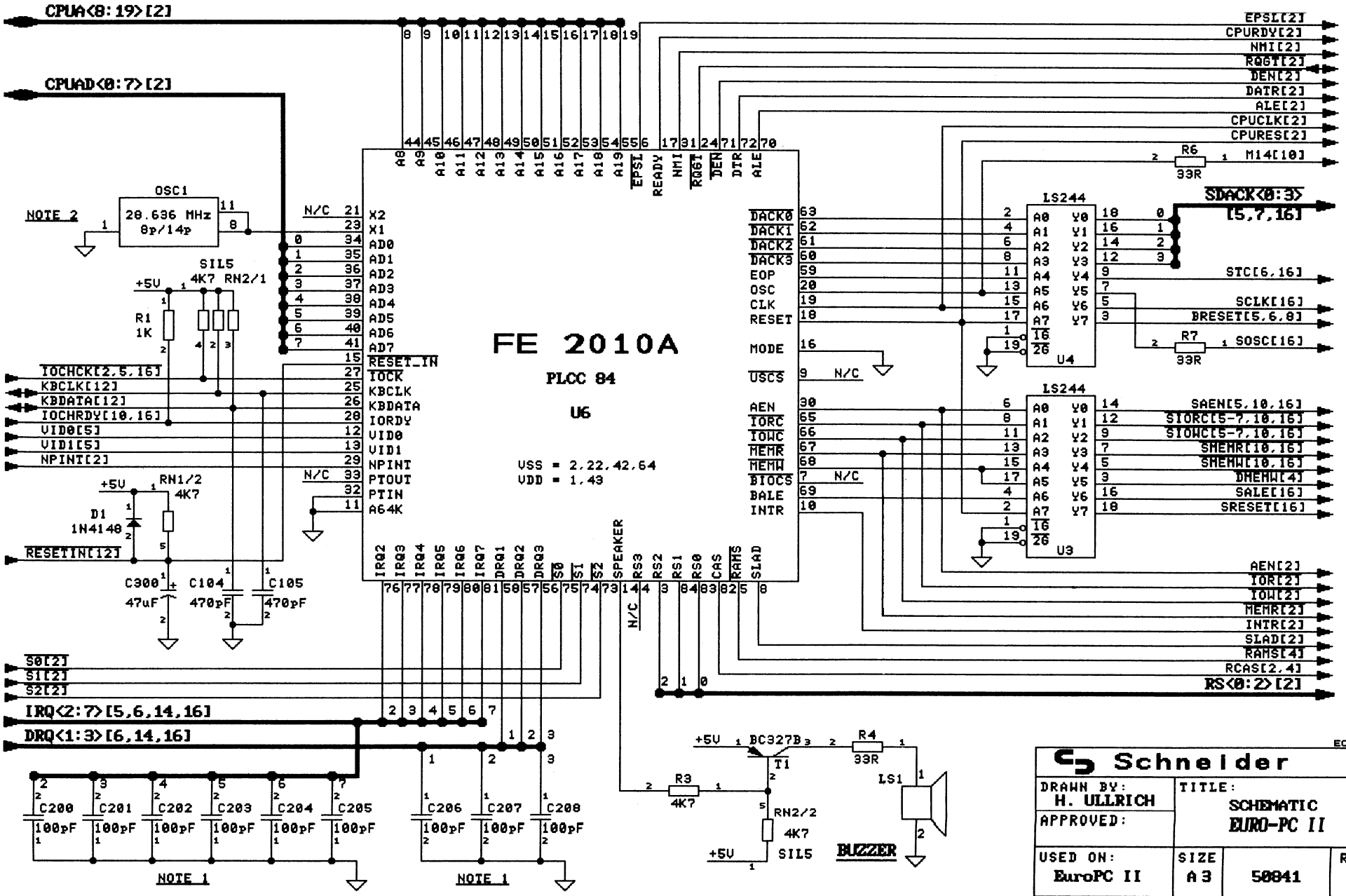
Schneider

DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 08-29-89	SHEET: 1 of 18		


CPU SECTION
CPUAD<0:7>[3]
CPUA<8:19>[3]
SA<0:19>[5-8,10,16]
SD<0:7>[5-7,10,16]
CPURES[3]
CPURDY[3]
NMI[3]
C100
100pF
INTR[3]
CPUCLK[3]
R5
68R
S0[3]
S1[3]
S2[3]
RQGT[3]
RN1/1
4K7
SIL9
8088-1
U1
8087-1
U32
R41
R42
R8
10K
NPINT[3]
SARA
ID. NO. 50774
PFP 100
U7
VSS = 15,39,67,88
VDD = 16,40,82,96
RN3
4K7
SIL9
MRD<0:7>[4]
MRA<0:8>[4]
JS4A
JS4B
NOTE 4
RCAS[3,4]
MCAS[4]
MRAS<0:2>[4]
IOCHCK[3,5,15]
RS<0:2>[3]
SARAAUX[4]
SLAD[3]
NOTE 2
JS3
27256
U5
BIOS EPROM
NOTE 3
NOTE 1
JS1A
JS1B
KRESET[12]
AEN[3]
IOR[3]
IOW[3]
SBASE[5]
ALE[3]
DEN[3]
DATR[3]
SARARAMS[4]
MEMR[3]
EPSL[3]
NOTES: 1) FOR 27512 EPROM: OPEN JS1A, CLOSE JS1B
2) JS3 CLOSED FOR SPECIAL TEST PURPOSES ONLY
3) EPROM ACCESS TIME IS 170 ns
4) JS4A OPEN, JS4B CLOSED ONLY IF U2 NOT ASSEMBLED
ECR-42
Schneider
DRAWN BY: H. ULLRICH
APPROVED:
TITLE: SCHEMATIC EURO-PC II
USED ON: EuroPC II
SIZE A3
50841
REV 4
DATE: 05-22-89
SHEET: 2 of 18

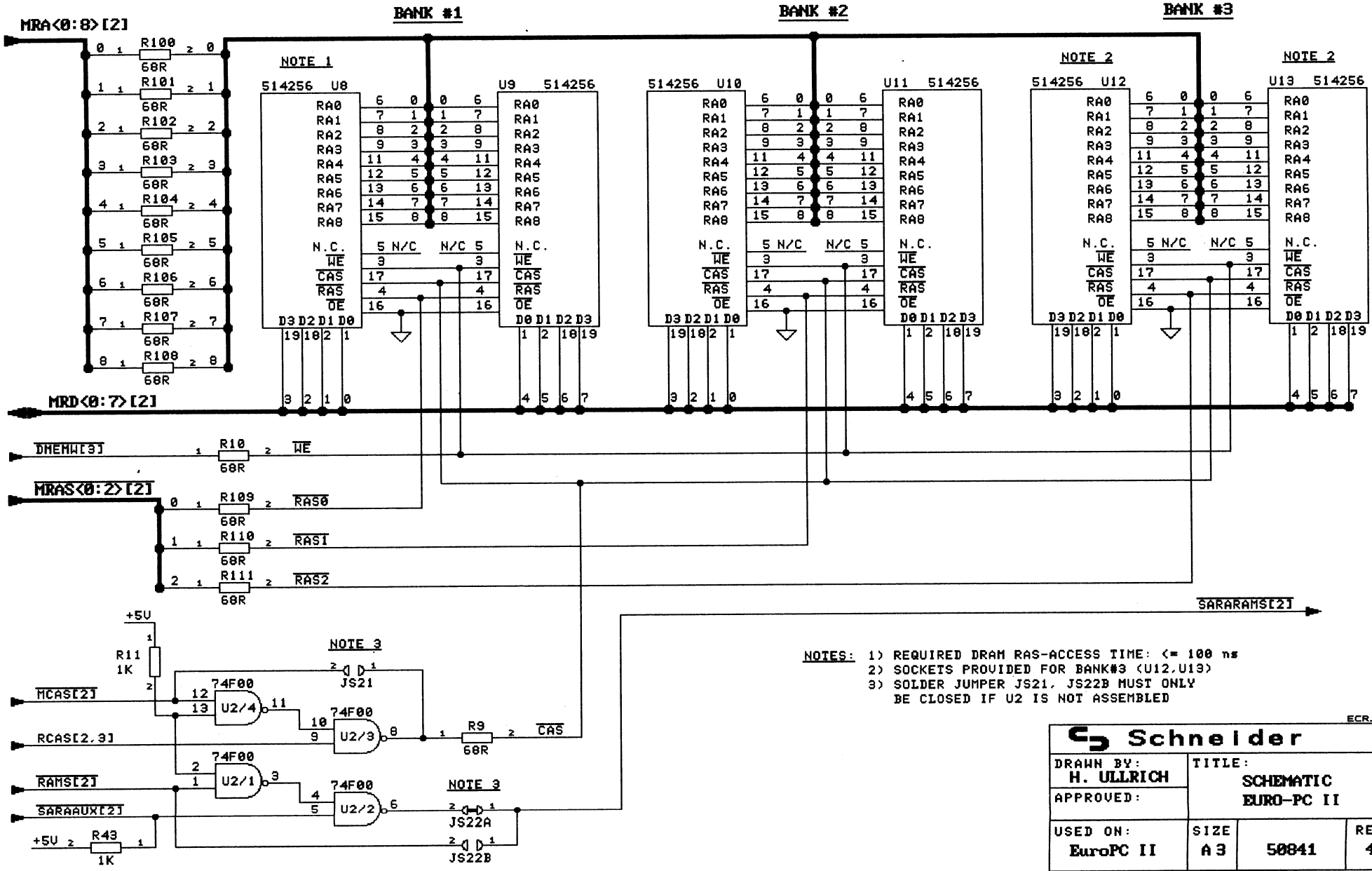
CPU CONTROLLER

NOTES: 1) C200-C208 ONLY ASSEMBLED IF REQUIRED!
2) OSC1 HAS 8p OR 14p HOUSING



Schneider			ECR_43
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 06-12-89	SHEET: 3 of 18		

512K (768K) MAIN RAM

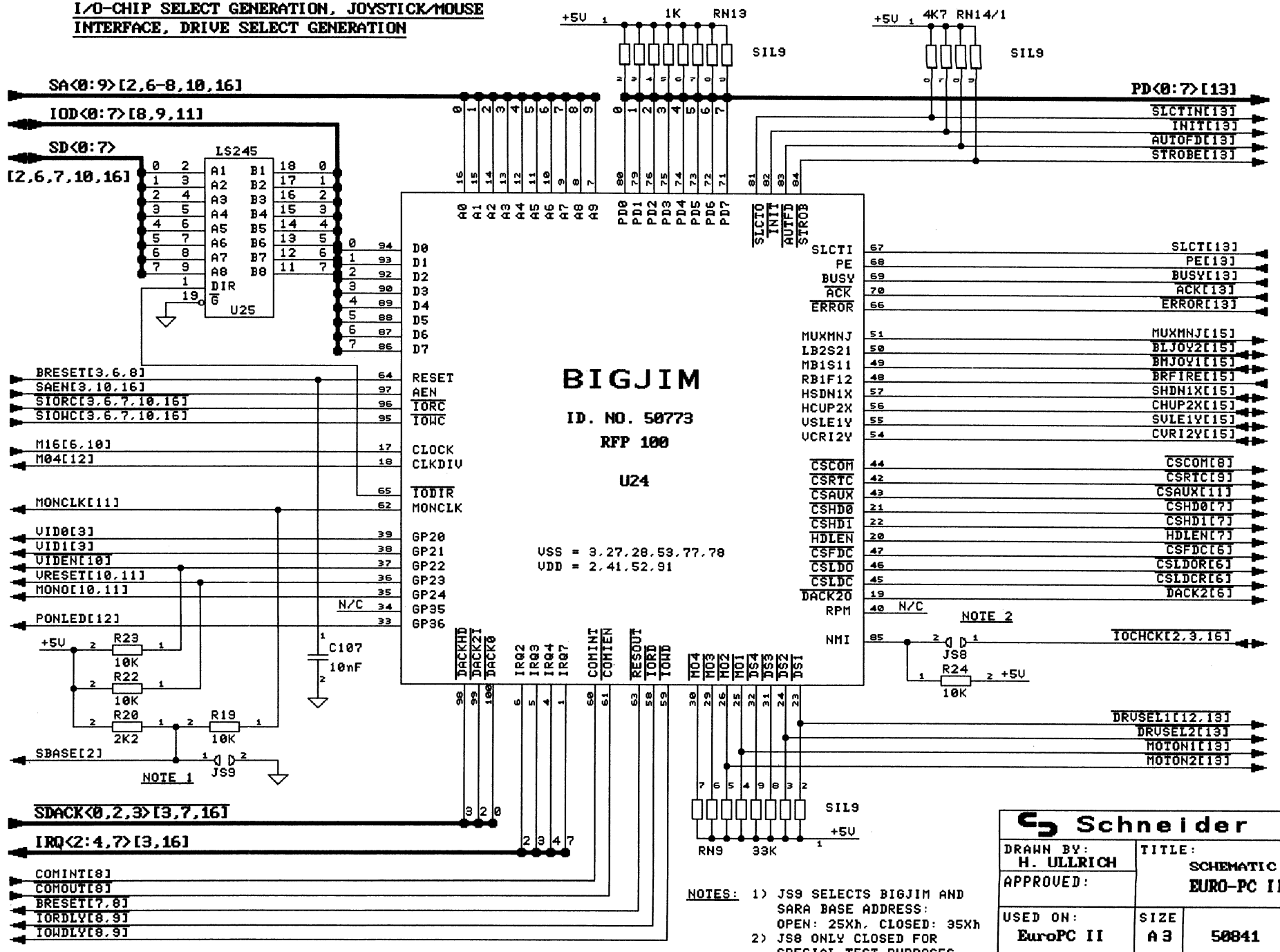


NOTES:
1) REQUIRED DRAM RAS-ACCESS TIME: <= 100 ns
2) SOCKETS PROVIDED FOR BANK#3 (U12,U13)
3) SOLDER JUMPER JS21, JS22B MUST ONLY BE CLOSED IF U2 IS NOT ASSEMBLED

ECR_44

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 06-05-89	SHEET: 4 of 18		

I/O-CHIP SELECT GENERATION, JOYSTICK/MOUSE INTERFACE, DRIVE SELECT GENERATION

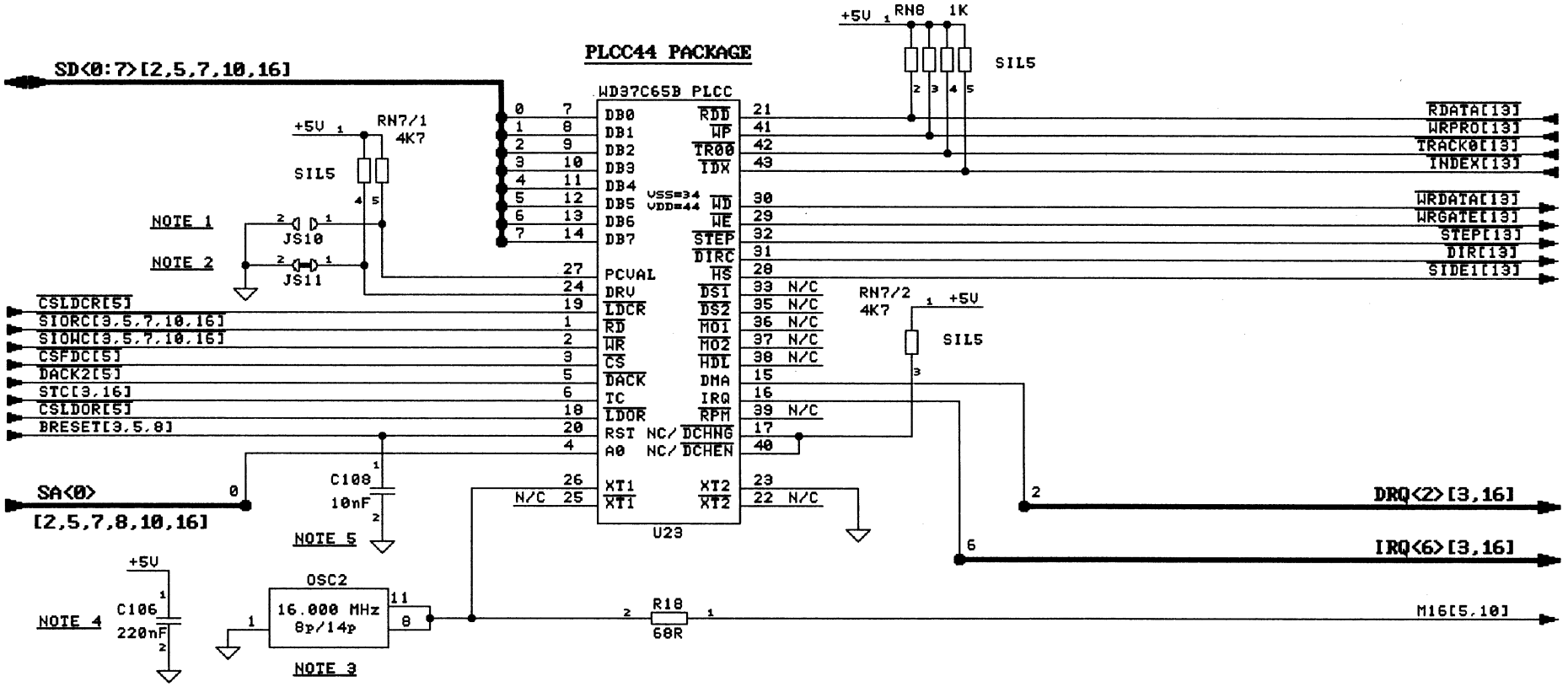


NOTES:
1) JS9 SELECTS BIGJIM AND SARA BASE ADDRESS: OPEN: 25Xh, CLOSED: 35Xh
2) JS8 ONLY CLOSED FOR SPECIAL TEST PURPOSES

ECR_45

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 05-22-89	SHEET: 5 of 18		

FLOPPY DISK CONTROLLER

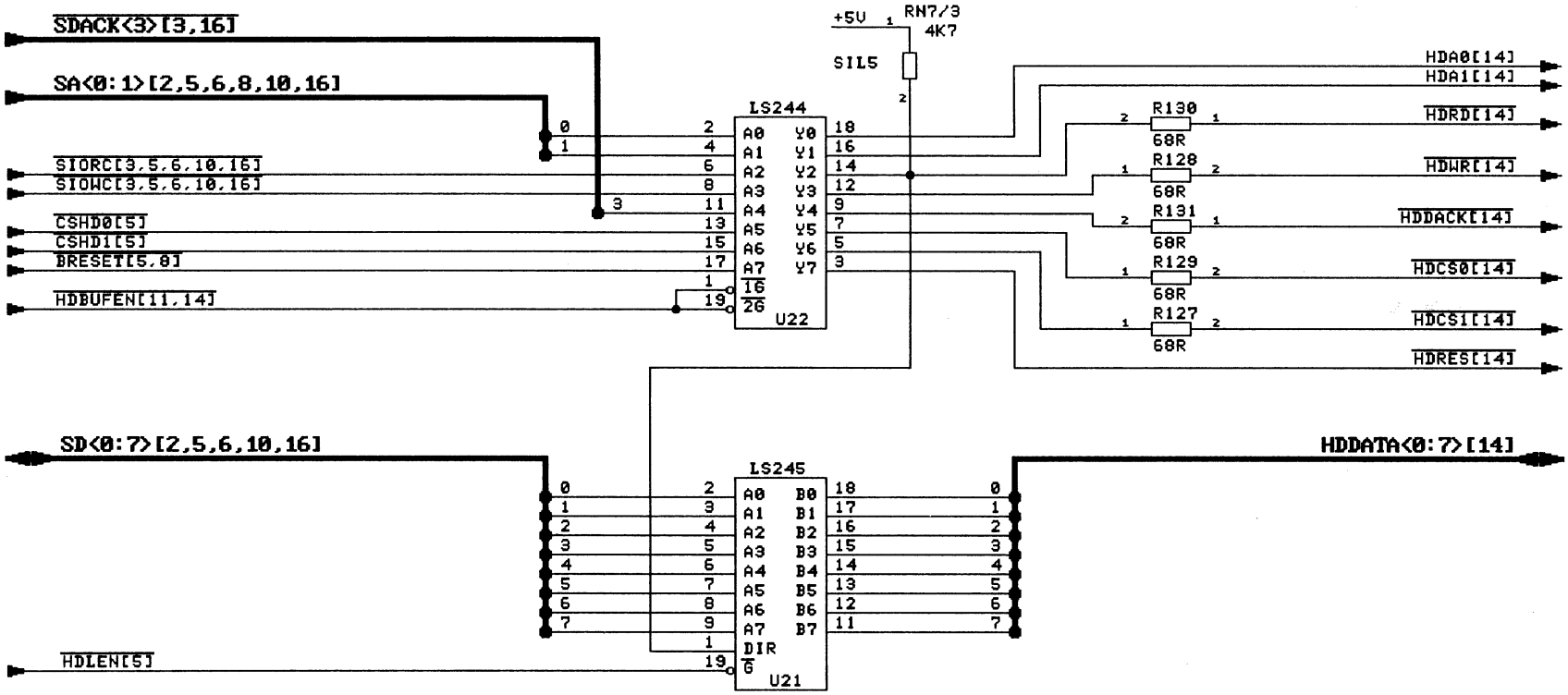


NOTES: 1) JS10 SELECTS WRITE PRECOMP. VAL.:
JS10 OPEN : 125 ns
JS10 CLOSED: 187 ns
2) JS11 SELECTS 2 SPEED SPINDLE DRIVE
IF CLOSED
3) OSCILLATOR +- 100 ppm, CMOS OUTPUT, 8p OR 14p HOUSING
4) C106 IS BLOCK CAP FOR OSC2
5) C108 IS REQUIRED FOR WD37C65B TYPE
FDC CONTROLLERS, LOCATED NEAR U23.

ECR_46

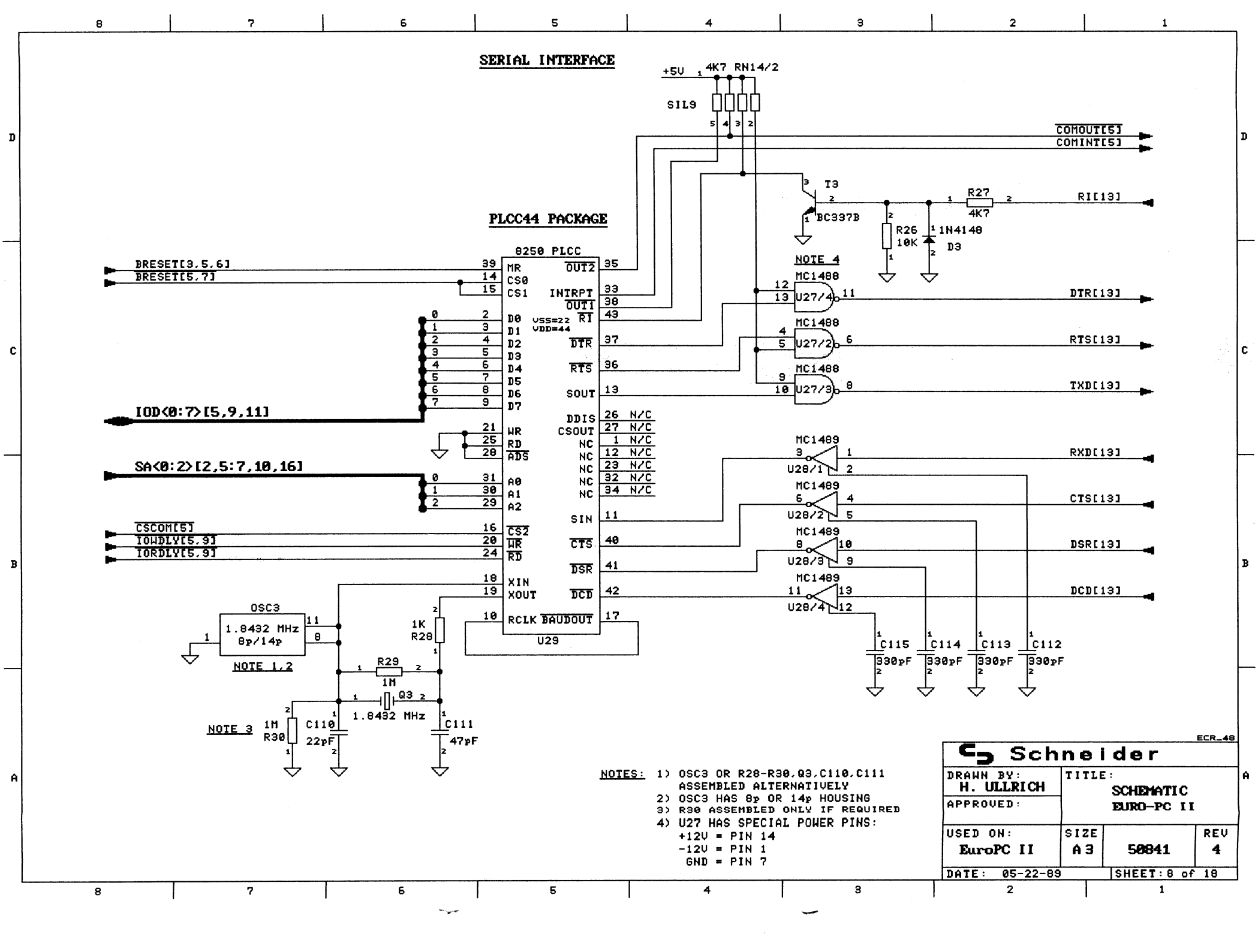
Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 05-22-89	SHEET: 6 of 18		

HARDDISK-INTERFACE

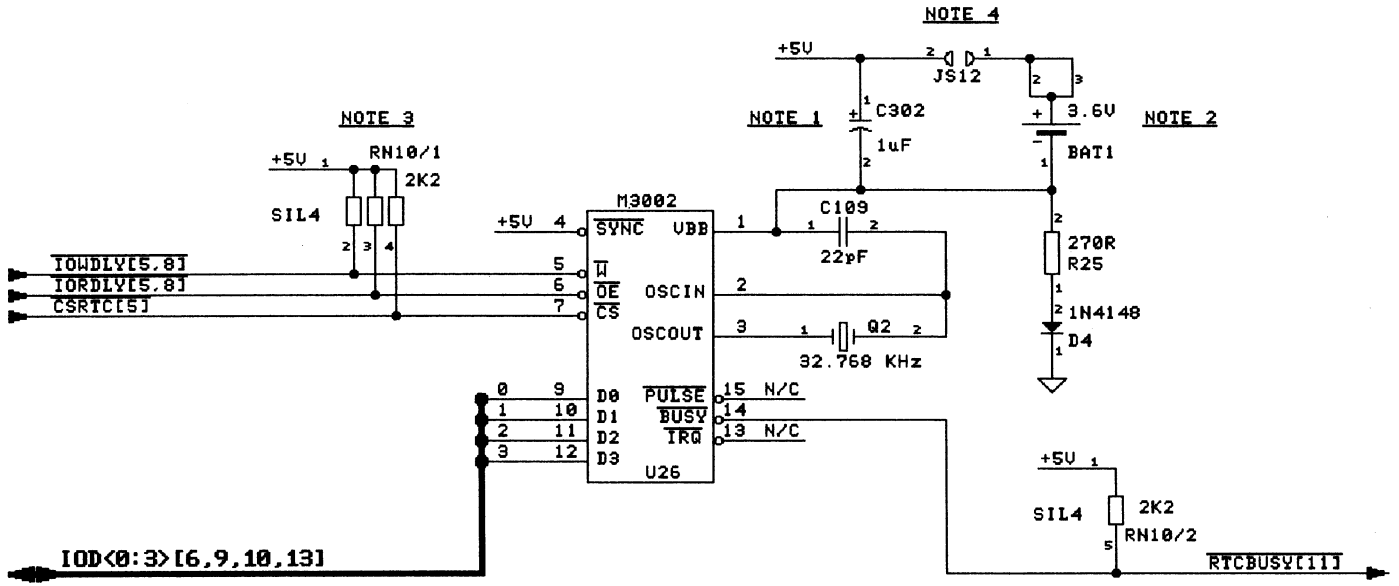


ECR_47

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 05-22-89	SHEET: 7 of 18		


SERIAL INTERFACE
PLCC44 PACKAGE
8250 PLCC
U29
+5V
4K7 RN14/2
SIL9
COMOUT[5]
COMINT[5]
T3
BC337B
R27
4K7
RI[13]
R26
10K
1N4148
D3
NOTE 4
MC1488
U27/4
U27/2
U27/3
DTR[13]
RTS[13]
TXD[13]
MC1489
U28/1
U28/2
U28/3
U28/4
RXD[13]
CTS[13]
DSR[13]
DCD[13]
C115
C114
C113
C112
330pF
BRESET[3,5,6]
BRESET[5,7]
IOD<0:7>[5,9,11]
SA<0:2>[2,5:7,10,16]
CSCOM[5]
IOWDLY[5,9]
IORDLY[5,9]
MR
CS0
CS1
D0
D1
D2
D3
D4
D5
D6
D7
WR
RD
ADS
A0
A1
A2
CS2
WR
RD
XIN
XOUT
RCLK
OUT2
INTRPT
OUT1
RI
DTR
RTS
SOUT
DDIS
CSOUT
NC
SIN
CTS
DSR
DCD
BAUDOUT
VSS=22
VDD=44
N/C
OSC3
1.8432 MHz
8p/14p
NOTE 1,2
R29
1M
1K
R28
Q3
1.8432 MHz
NOTE 3
1M
R30
C110
22pF
C111
47pF
NOTES: 1) OSC3 OR R28-R30,Q3,C110,C111
ASSEMBLED ALTERNATIVELY
2) OSC3 HAS 8p OR 14p HOUSING
3) R30 ASSEMBLED ONLY IF REQUIRED
4) U27 HAS SPECIAL POWER PINS:
+12V = PIN 14
-12V = PIN 1
GND = PIN 7
ECR-48
Schneider
DRAWN BY: H. ULLRICH
APPROVED:
TITLE: SCHEMATIC EURO-PC II
USED ON: EuroPC II
SIZE A3
50841
REV 4
DATE: 05-22-89
SHEET: 8 of 18

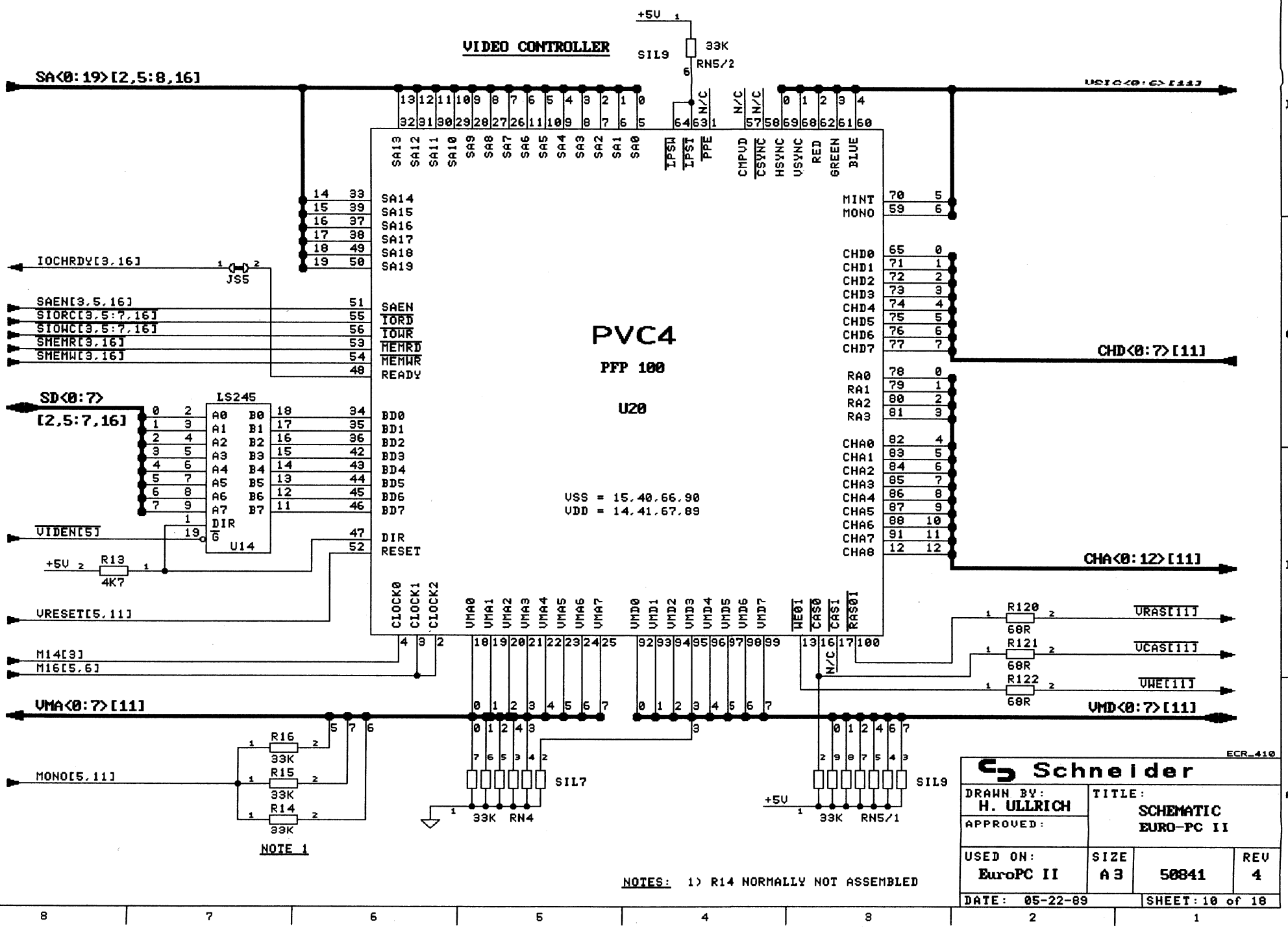
REAL TIME CLOCK



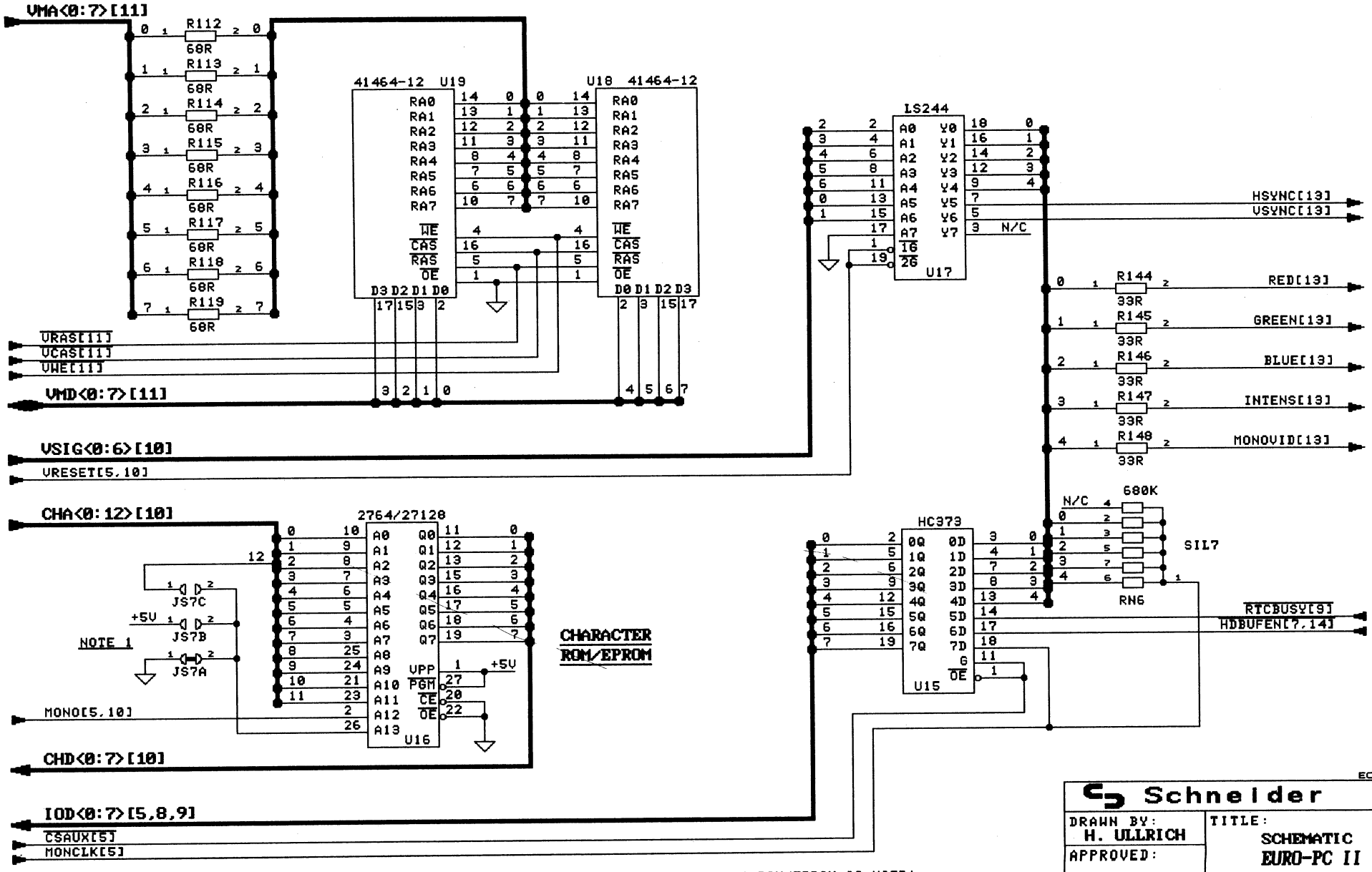
NOTES: 1) C302 IS A TANTAL TYPE
IT IS ONLY ASSEMBLED IF REQUIRED.
2) BAT1 IS A NiCd ACCU WITH 60mAh CAPACITY
3) RN10 ONLY ASSEMBLED IF REQUIRED
4) JS12 MUST BE CLOSED AFTER ASSEMBLY OF BAT1

ECR_49

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 05-22-89		SHEET: 9 of 18	


VIDEO CONTROLLER
PVC4
PFP 100
U20
SA<0:19>[2,5:8,16]
SD<0:7>
[2,5:7,16]
VMA<0:7>[11]
VMD<0:7>[11]
CHD<0:7>[11]
CHA<0:12>[11]
USIC<0:6>[11]
IOCHRDY[3,16]
SAEN[3,5,16]
SIORC[3,5:7,16]
SIOWC[3,5:7,16]
SMEMR[3,16]
SMEMW[3,16]
VIDEN[5]
VRESET[5,11]
M14[3]
M16[5,6]
MONO[5,11]
VRAS[11]
VCAS[11]
VWE[11]
LS245
U14
JS5
R13
4K7
R16
R15
R14
33K
R120
R121
R122
60R
SIL9
SIL7
RN4
RN5/2
RN5/1
VSS = 15,40,66,90
VDD = 14,41,67,89
NOTE 1
NOTES: 1) R14 NORMALLY NOT ASSEMBLED
Schneider
DRAWN BY: H. ULLRICH
APPROVED:
TITLE: SCHEMATIC EURO-PC II
USED ON: EuroPC II
SIZE A3
50841
REV 4
DATE: 05-22-89
SHEET: 10 of 10
ECR_410

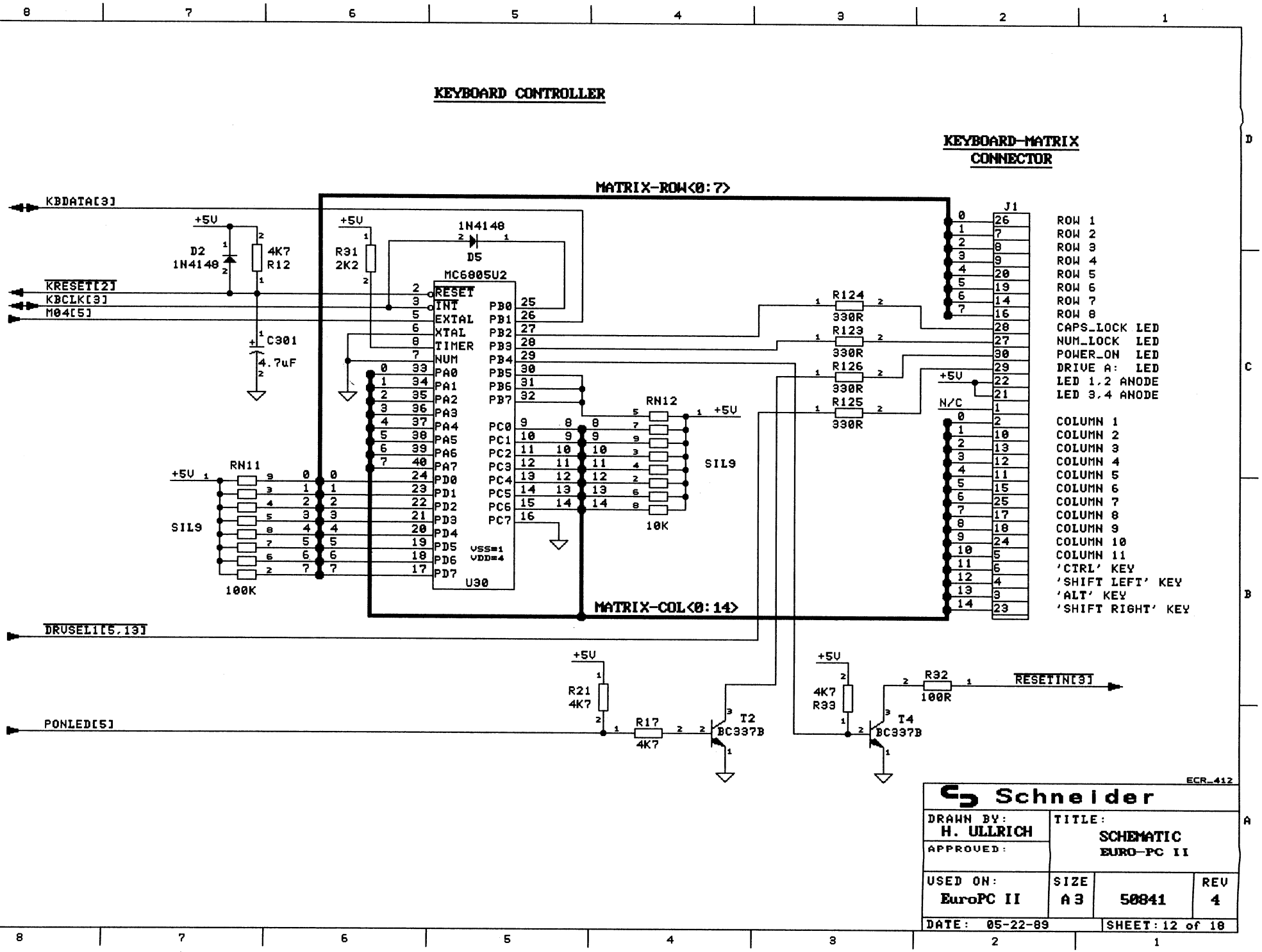
VIDEO RAM, CHARACTER EPROM, VIDEO BUFFER



NOTES: 1) JS7A,B,C HAVE EFFECT ONLY IF 27128 ROM/EPROM IS USED!
IN THIS CASE AN ALTERNATE MONO/COLOR CHARACTER SET CAN BE SELECTED:
JS7A CLOSED: NORMAL CHARSET ACTIVE
JS7B CLOSED: ALTERNATE CHARSET ACTIVE
JS7C CLOSED: SELECTION BY SOFTWARE

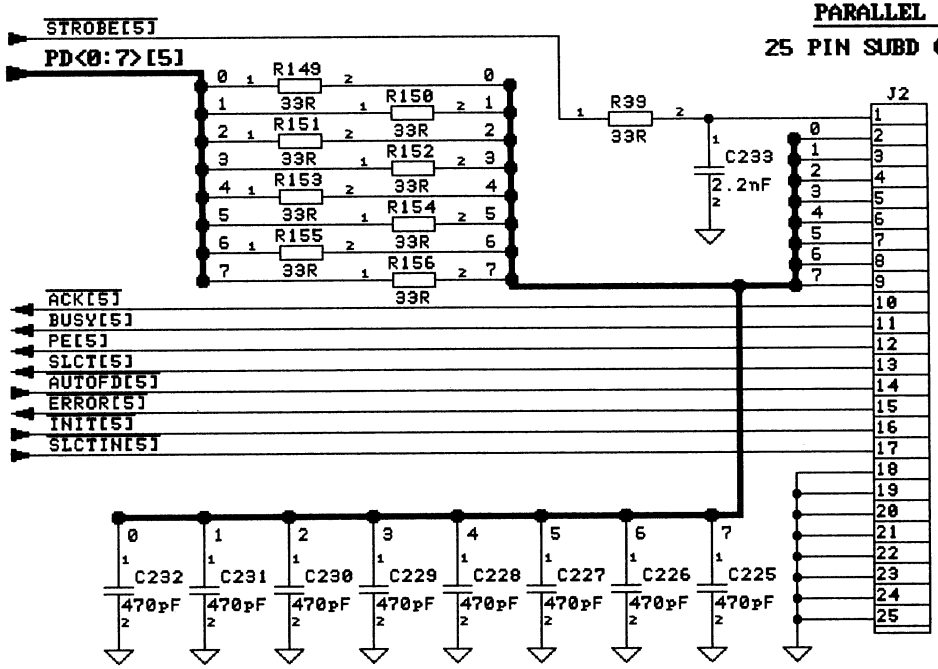
ECR_411

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 05-22-89	SHEET: 11 of 18		


KEYBOARD CONTROLLER
KEYBOARD-MATRIX CONNECTOR
MATRIX-ROW<0:7>
MATRIX-COL<0:14>
KBDATA[3]
KRESET[2]
KBCLK[3]
M04[5]
DRVSEL1[5,13]
PONLED[5]
RESETIN[3]
+5V
D2 1N4148
4K7 R12
C301 4.7uF
R31 2K2
1N4148 D5
MC6805U2
RESET
INT
EXTAL
XTAL
TIMER
NUM
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
VSS=1
VDD=4
U30
RN11
SIL9
100K
RN12
SIL9
10K
R124 330R
R123 330R
R126 330R
R125 330R
J1
N/C
ROW 1
ROW 2
ROW 3
ROW 4
ROW 5
ROW 6
ROW 7
ROW 8
CAPS_LOCK LED
NUM_LOCK LED
POWER_ON LED
DRIVE A: LED
LED 1,2 ANODE
LED 3,4 ANODE
COLUMN 1
COLUMN 2
COLUMN 3
COLUMN 4
COLUMN 5
COLUMN 6
COLUMN 7
COLUMN 8
COLUMN 9
COLUMN 10
COLUMN 11
'CTRL' KEY
'SHIFT LEFT' KEY
'ALT' KEY
'SHIFT RIGHT' KEY
R21 4K7
R17 4K7
T2 BC337B
R33 4K7
R32 100R
T4 BC337B
ECR-412
Schneider
DRAWN BY: H. ULLRICH
APPROVED:
TITLE: SCHEMATIC EURO-PC II
USED ON: EuroPC II
SIZE A3
50841
REV 4
DATE: 05-22-89
SHEET: 12 of 18
51

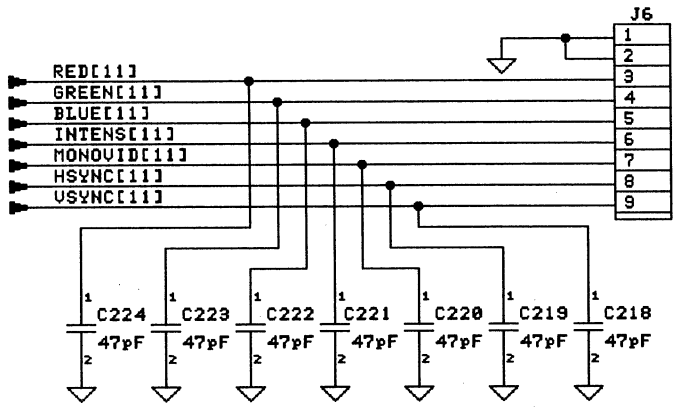
PARALLEL PORT

25 PIN SUBD CONN. FEM.



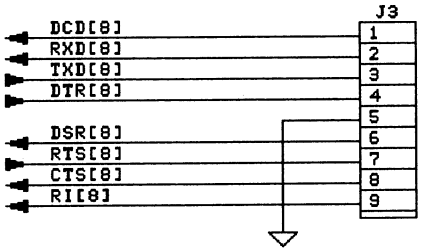
VIDEO MONO/RGB

9 PIN SUBD FEMALE



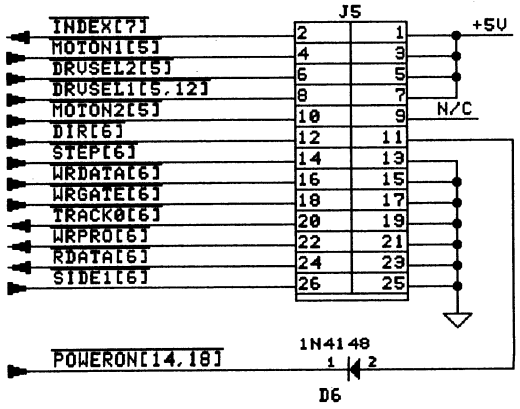
SERIAL PORT

9 PIN SUBD CONN. MALE



INTERNAL AND EXTERNAL FLOPPY DRIVE

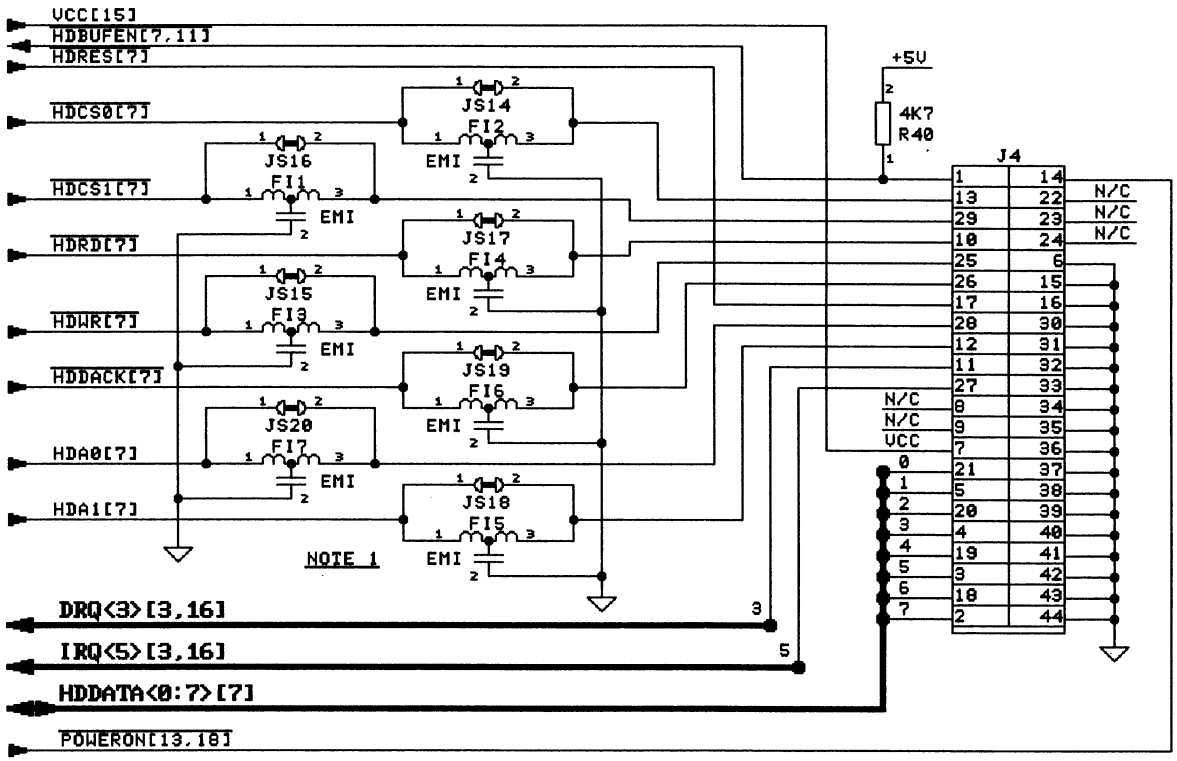
HEADER ASSY DUAL ROW 26 PIN



CONNECTORS I

ECR_413

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 05-22-89	SHEET: 13 of 18		



EXTERNAL HARDDISK DRIVE

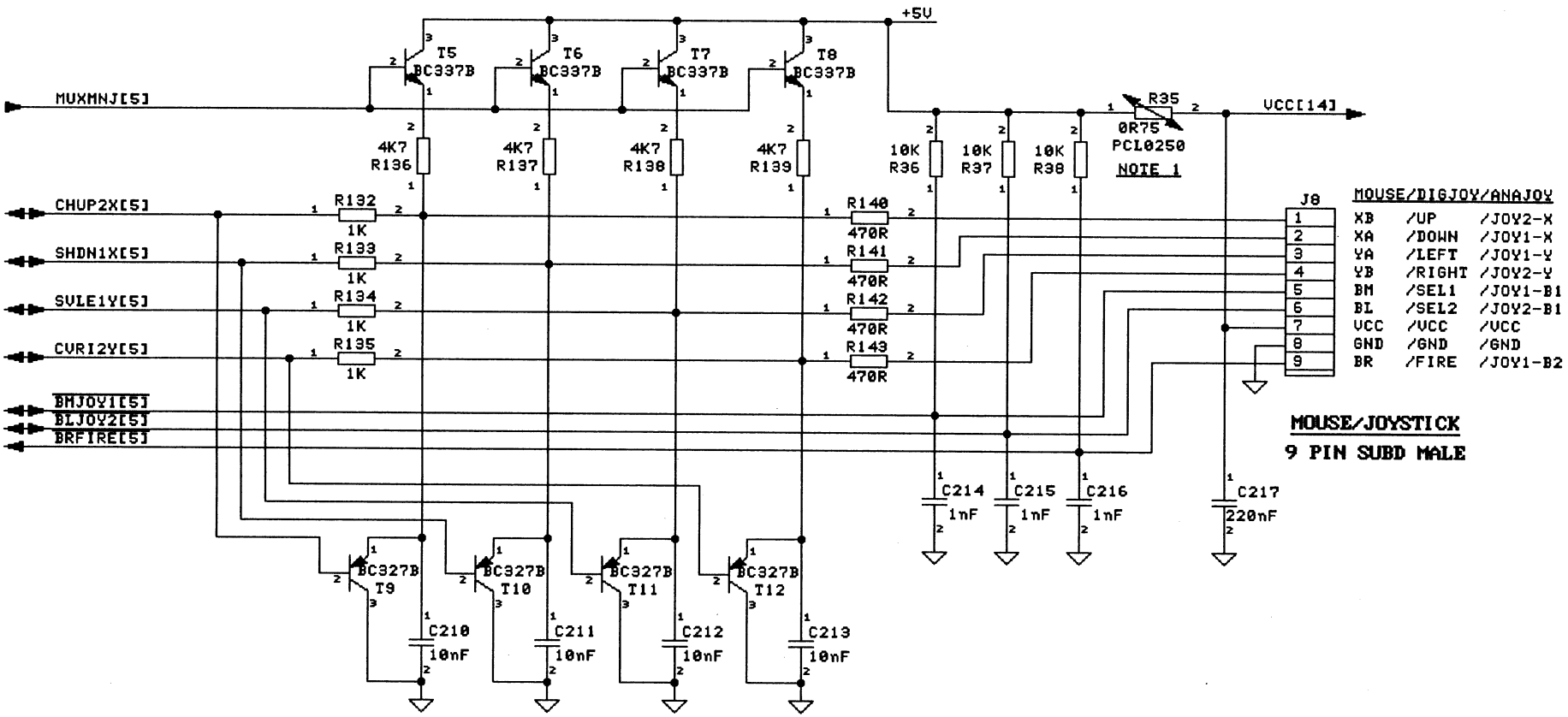
44 PIN MICRO-D CONN. FEMALE

CONNECTORS II

NOTES: 1) EMI FILTER FI1-FI7 NORMALLY NOT ASSEMBLED. IF FIx IS ASSEMBLED CORRESPONDING SOLDER JUMPER JSx MUST BE OPENED

ECR_414

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 05-22-89	SHEET: 14 of 18		



NOTES: 1) R35 IS A PTC RESISTOR FOR CURRENT LIMITATION

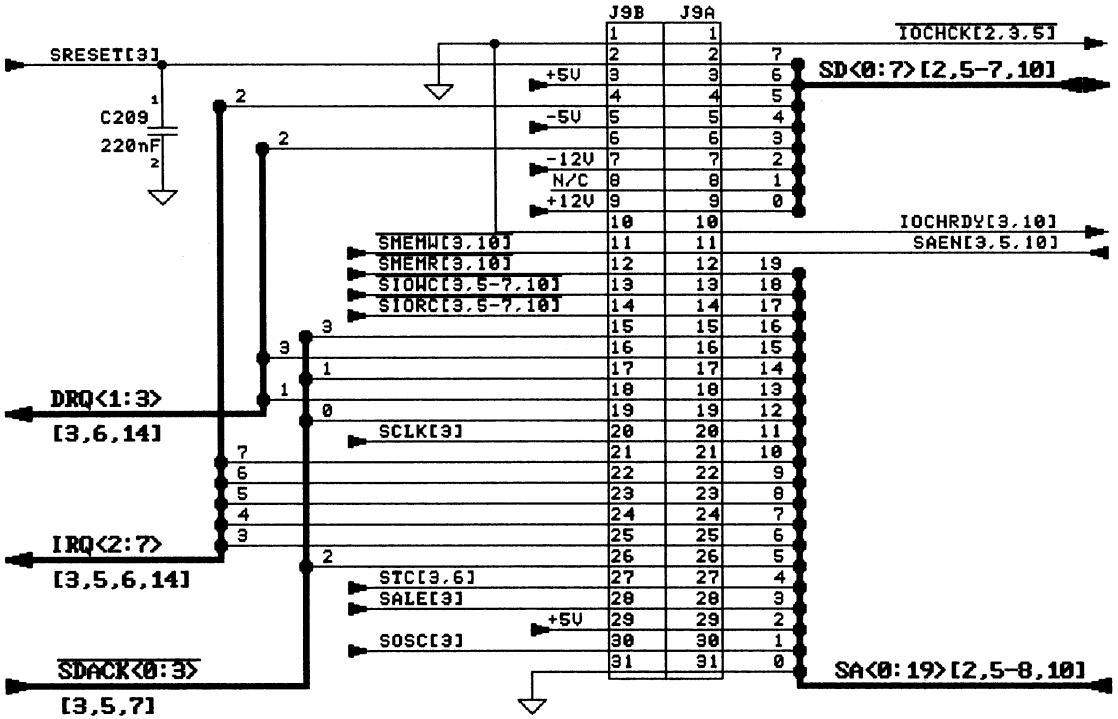
CONNECTORS III

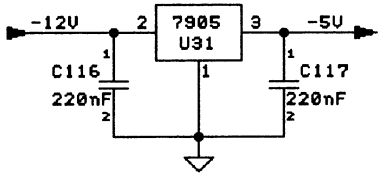
ECR_415

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 05-22-89	SHEET: 15 of 18		

EXPANSION-SLOT

62 PIN CARDEDGE CONN.





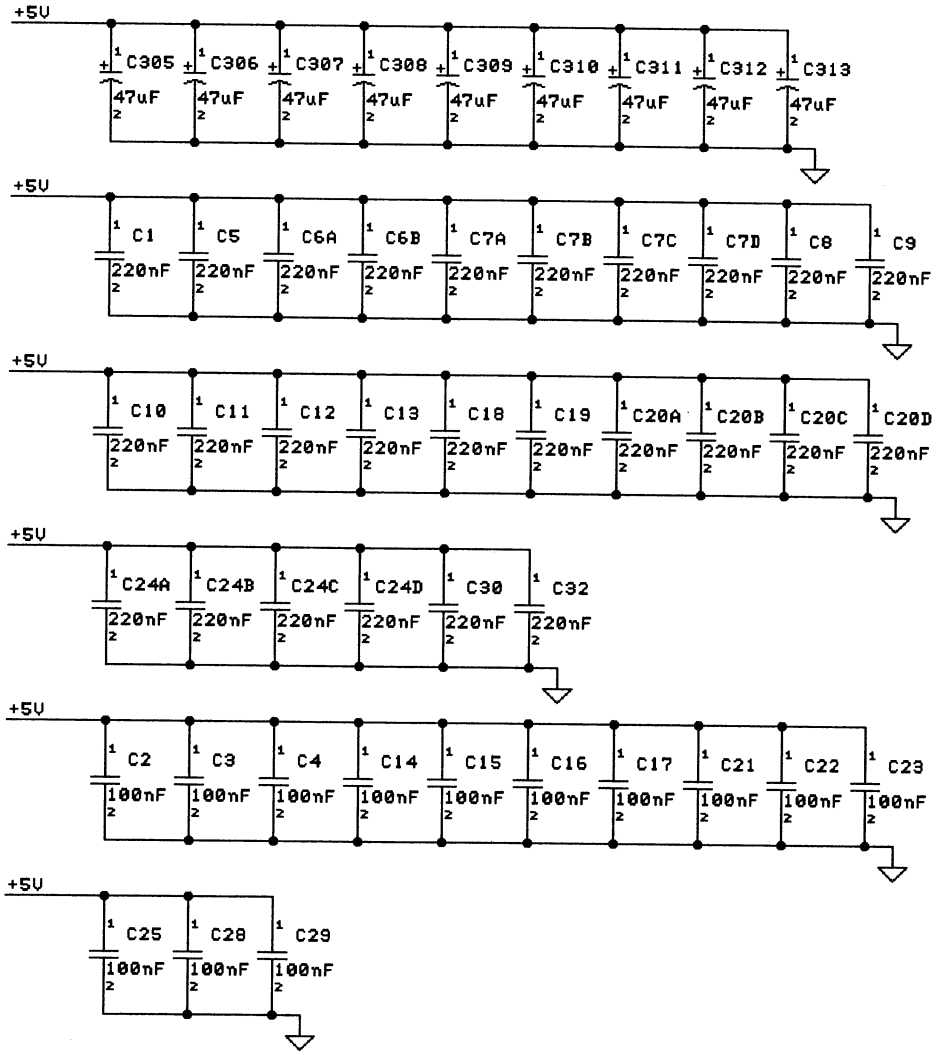
CONNECTORS IV

ECR-416

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 05-22-89	SHEET: 16 of 18		

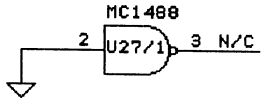
BLOCK CAPS +5V:

9 x 47uF/16V
26 x 220nF
13 x 100nF



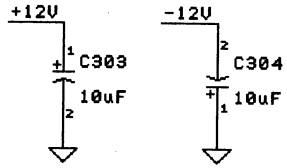
NOTE: BLOCK CAPS ONLY ASSEMBLED IF REQUIRED

SPARE GATES:



BLOCK CAPS +12V/-12V

2 x 10uF/25V

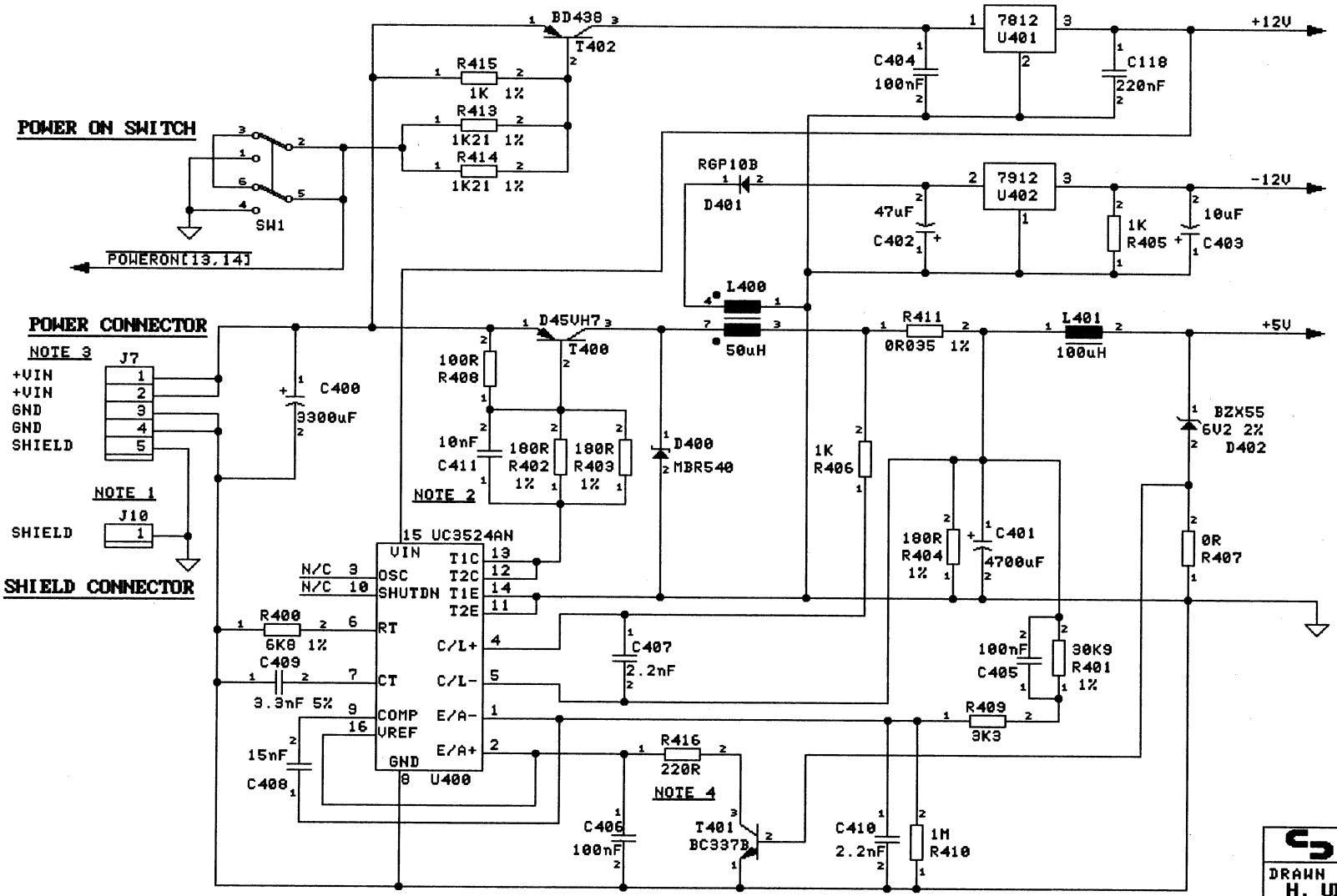


BLOCK CAPS, SPARE GATES

ECR-417

Schneider			
DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 05-22-89	SHEET: 17 of 18		

POWER SUPPLY



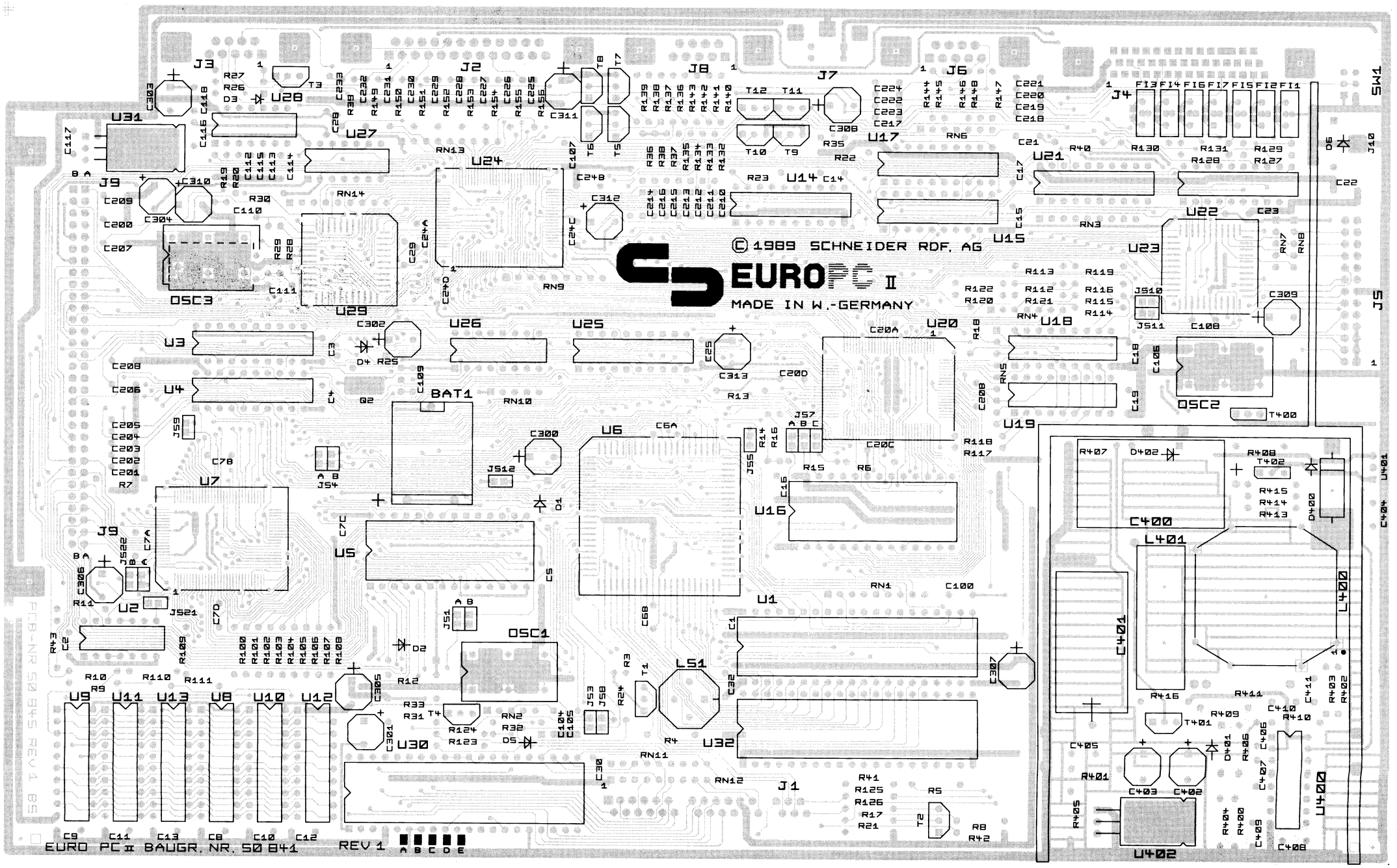
NOTES:
1) J10 CONNECTS KEYBOARD PLATE AND EXT. FDD PANEL
   J10 IS A FASTON 2.8 x 0.8 mm CONN.
2) C411 ONLY ASSEMBLED IF REQUIRED
3) +VIN SPECIFIED TO: +19V +- 4V
4) T401 AND R416 NOT ASSEMBLED

ECR-418

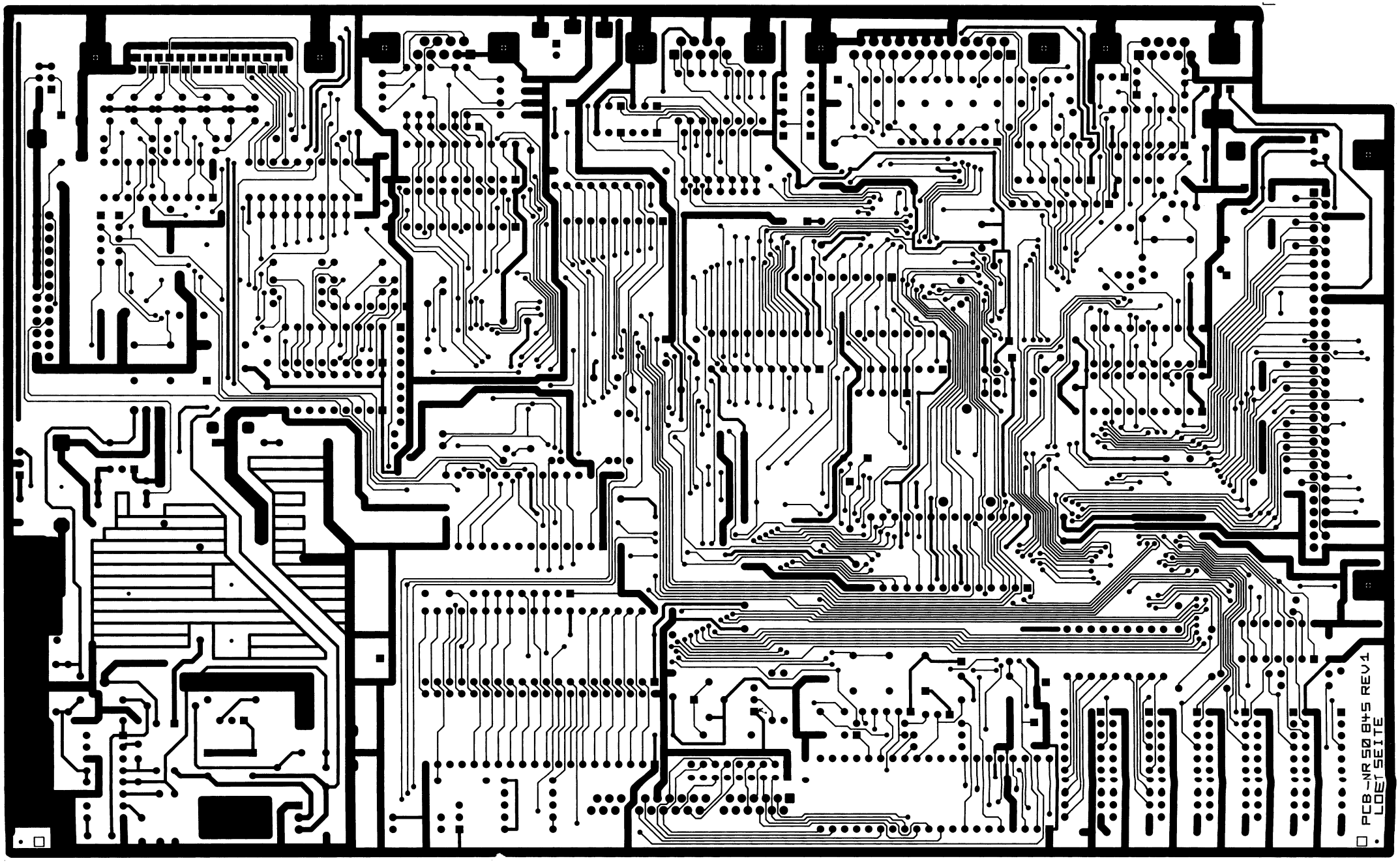
Schneider

DRAWN BY: H. ULLRICH	TITLE: SCHEMATIC EURO-PC II		
APPROVED:			
USED ON: EuroPC II	SIZE A3	50841	REV 4
DATE: 08-29-89	SHEET: 18 of 18		

Component side
Rev. 1



Soldering side
Rev. 1



Ersatzteilliste für Systemeinheit Euro PC II
Parts List for System Unit Euro PC II

Best.-Nr. Part.-No.	Bezeichnung	Description	Zeich.-Pos. Ref.-No.	Preisgruppe
50 100 00	IC SAB 80 88-1 P	IC SAB 80 88-1 P	U 1	C 9
50 123 00	IC 74 F 00	IC 74 F 00	U 2	A 5
50 128 00	IC 74 LS 244	IC 74 LS 244	U 3, 4	B 0
50 145 00	IC BIOS 27256-17	IC BIOS 27256-17	U 5	C 9
50 103 00	IC FE 2010 A	IC FE 2010 A	U 6	E 3
50 774 00	IC SARA MSM 79H000	IC SARA MSM 79H000	U 7	C 7
50 160 00	IC DRAM 256K × 4	IC DRAM 256K × 4	U 8–13	D 0
50 129 00	IC 74 LS 245	IC 74 LS 245	U 14	B 0
50 125 00	IC 74 HC 373	IC 74 HC 373	U 15	A 7
50 146 00	IC ROM 64K 200nS (D)	IC ROM 64K 200nS (D)	U 16	C 3
50 128 00	IC 74 LS 244	IC 74 LS 244	U 17	B 0
50 110 00	IC DRAM 64K × 4	IC DRAM 64K × 4	U 18, 19	D 4
50 104 00	IC PVC 4	IC PVC 4	U 20	E 5
50 129 00	IC 74 LS 245	IC 74 LS 245	U 21	B 0
50 128 00	IC 74 LS 244	IC 74 LS 244	U 22	B 0
50 105 00	IC WD 37C65A/B-JM00	IC WD 37C65A/B-JM00	U 23	D 5
50 773 00	IC BIG JIM TC110 G008	IC BIG JIM TC110 G008	U 24	D 1
50 129 00	IC 74 LS 245	IC 74 LS 245	U 25	B 0
50 108 00	IC M 3002	IC M 3002	U 26	C 3
50 120 00	IC MC 1488	IC MC 1488	U 27	A 5
50 121 00	IC MC 1489	IC MC 1489	U 28	A 5
50 910 00	IC 8250 PLCC	IC 8250 PLCC	U 29	C 3
50 102 00	IC MC 6805 U2	IC MC 6805 U2	U 30	C 3
50 238 00	IC 7905 TO 220	IC 7905 TO 220	U 31	A 6
51 094 00	IC UC 3524 AN	IC UC 3524 AN	U 400	B 4
51 098 00	IC 7812 CV	IC 7812 CV	U 401	A 5
51 099 00	IC 7912 CV	IC 7912 CV	U 402	A 5
50 711 00	IC ROM 64K 200nS (P)	IC ROM 64K 200nS (P)	U 16	C 3
50 712 00	IC ROM 64K 200nS (GR)	IC ROM 64K 200nS (GR)	U 16	C 3
50 713 00	IC ROM 64K 200nS (DK/N)	IC ROM 64K 200nS (DK/N)	U 16	C 3

Note: All spare parts with countryindex are reserved for foreign distributors only.

Ersatzteilliste für Systemeinheit Euro PC II
Parts List for System Unit Euro PC II

Best.-Nr. Part.-No.	Bezeichnung	Description	Zeich.-Pos. Ref.-No.	Preisgruppe
10 801 00	Transistor BC 327-16	Transistor BC 327-16	T 1, 9–12	A 6
10 802 00	Transistor BC 337-16	Transistor BC 337-16	T 2–8	A 6
51 095 00	Transistor D 45 VH 7	Transistor D 45 VH 7	T 400	B 5
50 848 00	Transistor BD 438	Transistor BD 438	T 402	A 3
11 241 00	Diode 1 N 4148	Diode 1 N 4148	D 1–6	A 2
51 096 00	Diode SB 540	Diode SB 540	D 400	B 0
51 100 00	Diode RGP 10 B	Diode RGP 10 B	D 401	A 9
51 101 00	Z-Diode BZX 55 6V2	Z-Diode BZX 55 6V2	D 402	A 1
51 040 00	Quarz 32.768 kHz	Crystal 32,768 kHz	Q 2	A 7
50 312 00	Quarz 1.8432 MHz HC-18U	Crystal 1,8432 MHz HC-18U	Q 3	B 5
51 041 00	Oszillator 28,636 MHz	Oscillator 28.636 MHz	OSC 1	C 3
50 313 00	Oszillator 16 MHz	Oscillator 16 MHz	OSC 2	C 3
50 319 00	R-Netzwerk 8 × 4K7	R, Network 8 × 4K7	RN 1	A 3
51 048 00	R-Netzwerk 4 × 4K7	R, Network 4 × 4K7	RN 2	A 3
50 319 00	R-Netzwerk 8 × 4K7	R, Network 8 × 4K7	RN 3	A 3
51 049 00	R-Netzwerk 6 × 33K	R, Network 6 × 33K	RN 4	A 3
51 050 00	R-Netzwerk 8 × 33K	R, Network 8 × 33K	RN 5	A 3
50 230 00	R-Netzwerk 6 × 680K	R, Network 6 × 680K	RN 6	A 3
51 048 00	R-Netzwerk 4 × 4K7	R, Network 4 × 4K7	RN 7	A 3
51 046 00	R-Netzwerk 4 × 1K	R, Network 4 × 1K	RN 8	A 3
51 050 00	R-Netzwerk 8 × 33K	R, Network 8 × 33K	RN 9	A 3
51 047 00	R-Netzwerk 4 × 2K2	R, Network 4 × 2K2	RN 10	A 3
51 051 00	R-Netzwerk 8 × 100K	R, Network 8 × 100K	RN 11	A 3
50 316 00	R-Netzwerk 8 × 10K	R, Network 8 × 10K	RN 12	A 3
50 317 00	R-Netzwerk 8 × 1K	R, Network 8 × 1K	RN 13	A 3
50 319 00	R-Netzwerk 8 × 4K7	R, Network 8 × 4K7	RN 14	A 3
50 321 00	PTC PCL 0250,0	PTC PCL 0250.0	R 35	A 9
51 102 00	Drossel BV 703300-51	Coil BV 703300-51	L 400	C 2
51 103 00	Drossel	Coil	L 401	A 4
50 844 00	Schalter	Switch	SW 1	B 0
50 126 00	Batterie 3,6 V	Battery 3.6 V	BAT 1	B 8
50 332 00	Piepser	Buzzer	LS 1	A 8
51 298 00	Knopf EIN/AUS	Knob ON/OFF		A 5
50 137 00	Stecker FPC 30pol.	Socket FPC 30-pin	J 1	B 5
50 133 00	Buchse SUB-D 25pol.	Socket SUB-D 25-pin	J 2	B 2
50 131 00	Buchse SUB-D 9pol.	Socket SUB-D 9-pin	J 3	A 9
50 134 00	Buchse HDD 22 44pol.	Socket HDD 22 44-pin	J 4	C 7
51 569 00	Stiftleiste RM 2,54 26pol.	Socket RM 2, 26-pin.	J 5	A 7
50 132 00	Buchse SUB-D 9pol.	Socket SUB-D 9-pin	J 6	B 0
51 057 00	Buchse JST MD-S 4000-10	Socket JST MD-S 4000-10	J 7	A 9
50 138 00	Stecker CARDEDGE 2 × 31pol.	Socket CARDEDGE 2 × 31-pin	J 9	C 1

CAUTION:

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

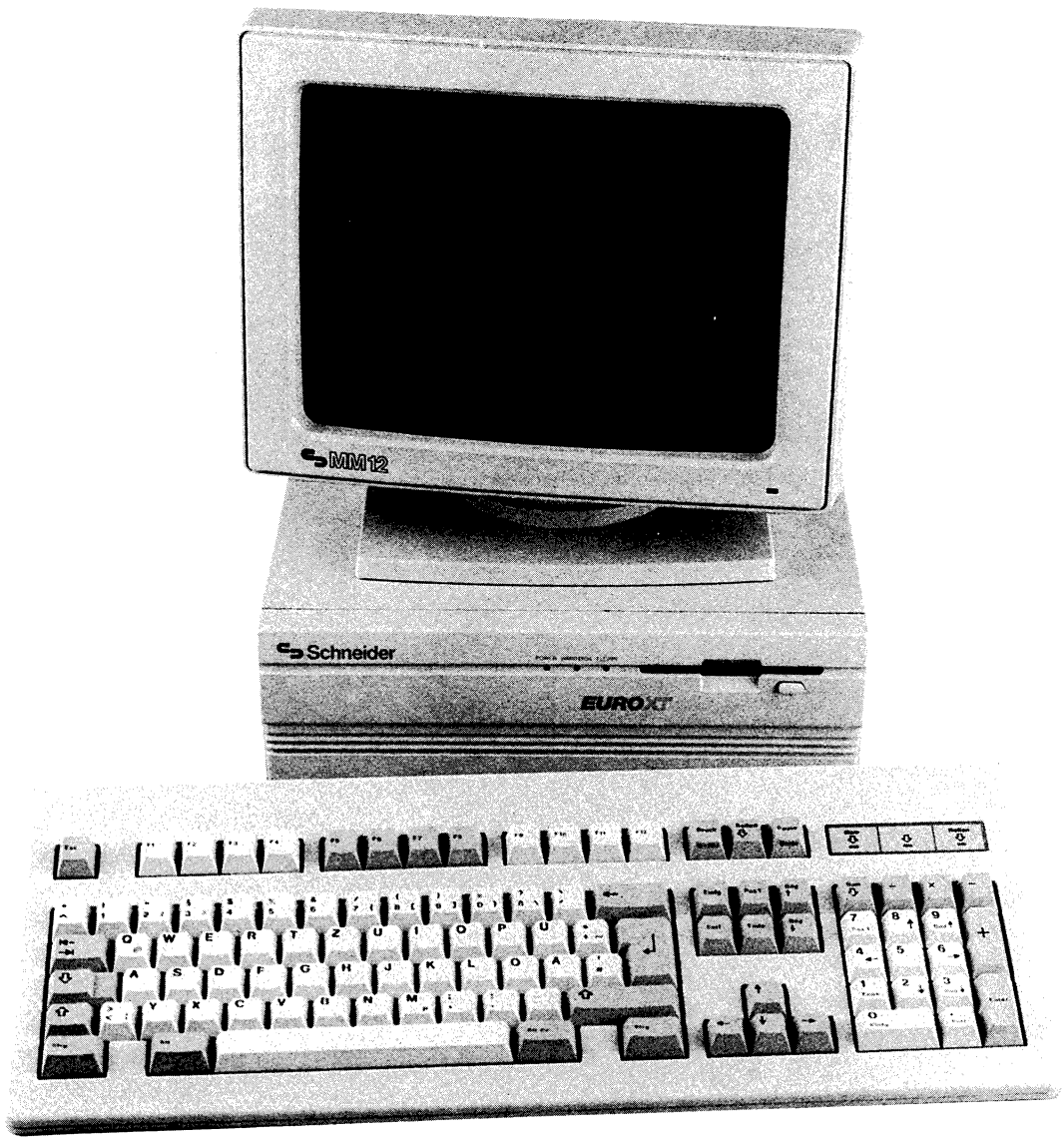
Ref.: IEC/74 (Central Office) 104.

Kundendienst-Handbuch
Service Manual

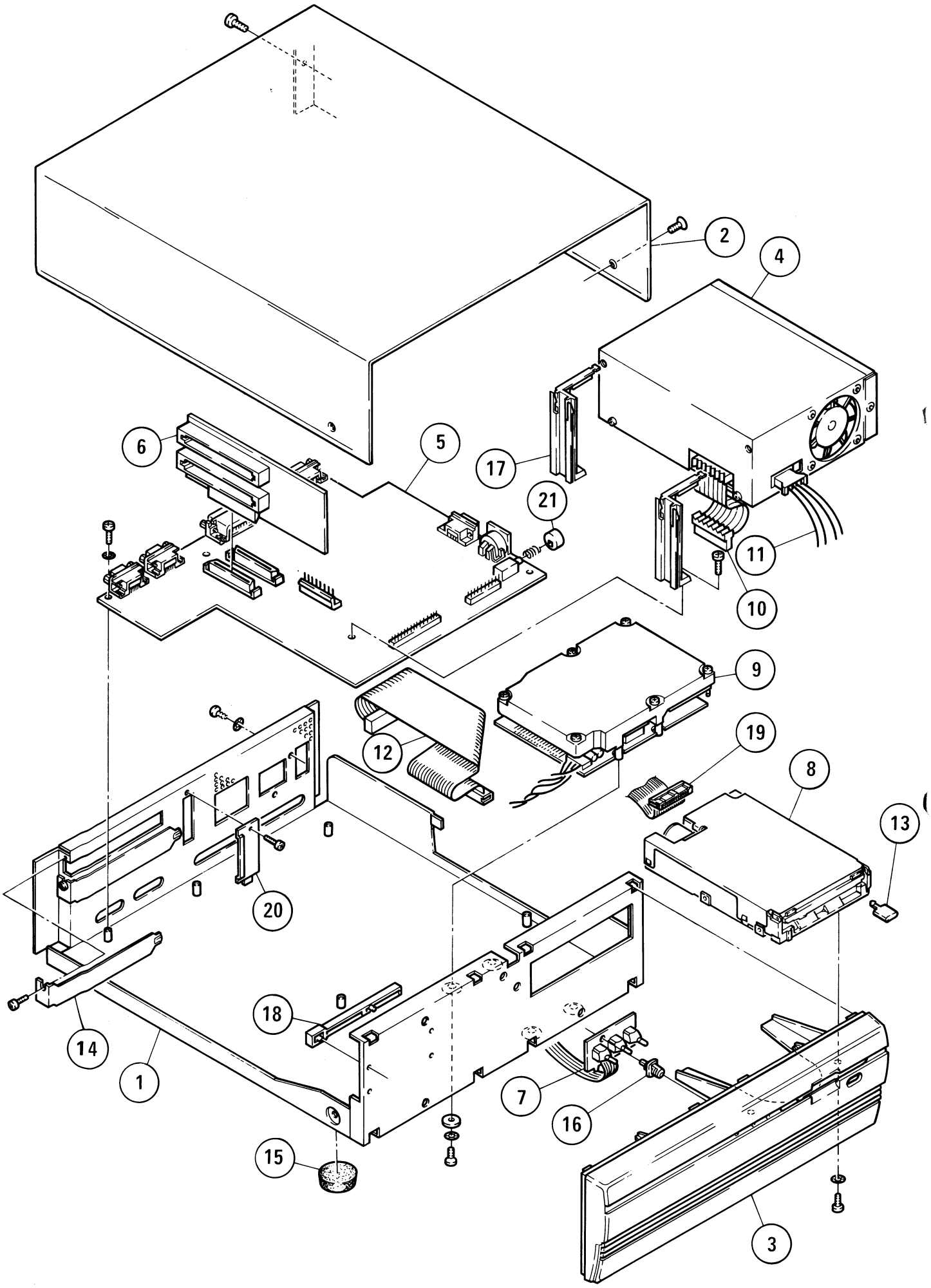
Schneider

SYSTEMEINHEIT
EURO XT

Ident-Nr.: 43489



Exploded view

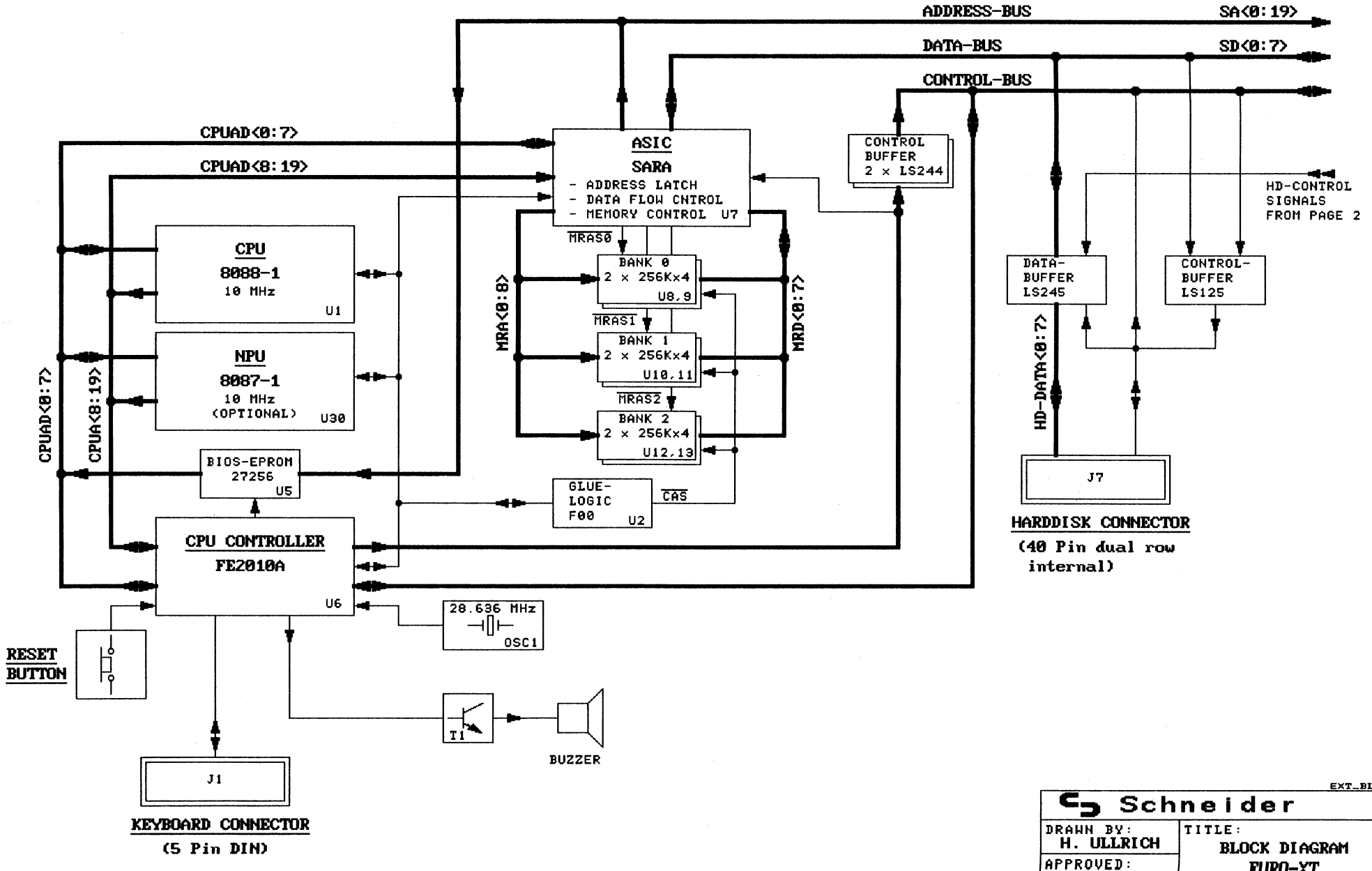


Ersatzteilliste für Systemeinheit Euro XT
Parts List for System Unit Euro XT

Best.-Nr. Part.-No.	Bezeichnung	Description	Zeich.-Pos. Ref.-No.	Preisgruppe
51 451 00	Styropor Euro XT/AT	Polyfoam		C 1
51 452 00	Faltkarton Euro XT/AT	Gift box		C 0
51 254 00	Gehäuseunterteil	Cabinet, bottom	1	D 4
51 257 00	Gehäuseoberteil	Cabinet, top	2	D 2
51 454 00	Frontblende	Front, mask	3	C 3
51 446 00	Netzteil Euro XT	Power supply	4	F 8
51 424 00	Platine CPU	P.C.B. CPU	5	J 9
51 427 00	Platine Steckplatz	P.C.B. slot	6	D 3
51 609 00	Platine LED	P.C.B. LED	7	C 2
50 472 00	Floppylaufwerk	Floppy disk drive	8	F 8
51 455 00	HD-Laufwerk	Hard disk drive	9	J 2
51 430 00	Verbindungskabel, Netz-CPU	Cabel, connection	10	B 3
51 458 00	Adapterkabel HD 4pol.	Cabel, adapter	11	B 4
51 444 00	HD-Kabel	Cabel, HDD	12	C 0
50 056 00	Druckknopf für FDD (Toshiba)	Push-button, FDD (Toshiba)	13	A 5
50 294 00	Druckknopf für FDD (Sony)	Push-button, FDD (Sony)	13	A 5
50 020 00	Blindblech	Plate, blind	14	A 7
51 456 00	Gehäusefuß	Leg, cabinet	15	A 4
51 457 00	Platinenhalter	Holder	16	A 3
51 262 00	Führungsschiene Steckplatz	Guide rail, slot	17	A 6
50 865 00	Führungsschiene Steckkarte	Guide rail, socket card	18	A 6
51 443 00	Kabelbaum FDD	Cord, FDD	19	B 6
51 266 00	Abdeckung	Cover	20	A 5
51 630 00	Druckknopf RESET	Push-button, RESET	21	A 6
51 750 00	Tastatur (D)	Keyboard (D)		F 6
51 751 00	Tastatur (GB)	Keyboard (GB)		F 6
51 752 00	Tastatur (F) Dual	Keyboard (F) Dual		F 6
51 753 00	Tastatur (F)	Keyboard (F)		F 6
51 754 00	Tastatur (E)	Keyboard (E)		F 6
51 755 00	Tastatur (CH)	Keyboard (CH)		F 6
51 756 00	Tastatur (DK)	Keyboard (DK)		F 6
51 757 00	Tastatur (I)	Keyboard (I)		F 6
51 758 00	Tastatur (N)	Keyboard (N)		F 6
51 759 00	Tastatur (S/SF)	Keyboard (S/SF)		F 6
51 760 00	Tastatur (P)	Keyboard (P)		F 6
51 761 00	Tastatur (GR)	Keyboard (GR)		F 6

Note: All spare parts with countryindex are reserved for foreign distributors only.

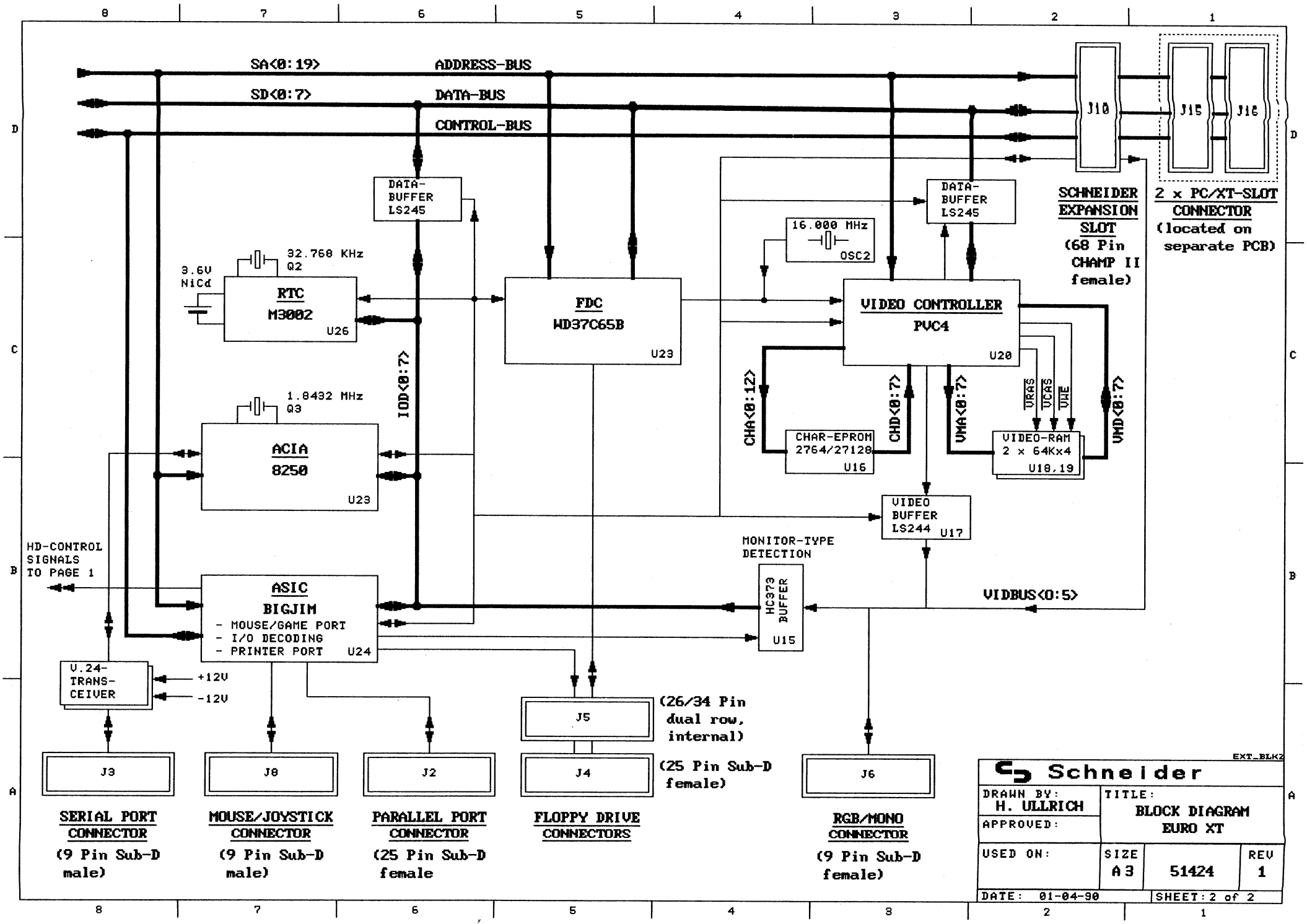
All 3.5" and 5.25" floppydisks must be replaced by new ones. Schneider passes no exchange price to the distributor or dealer.



EXT_BLK1

Schneider

DRAWN BY: H. ULLRICH	TITLE: BLOCK DIAGRAM *EURO-XT*		
APPROVED:			
USED ON:	SIZE A3	51424	REV 1
DATE: 01-04-90	SHEET: 1 of 2		


SA<0:19> ADDRESS-BUS
SD<0:7> DATA-BUS
CONTROL-BUS
J10
J15
J16
SCHNEIDER EXPANSION SLOT (68 Pin CHAMP II female)
2 x PC/XT-SLOT CONNECTOR (located on separate PCB)
DATA-BUFFER LS245
DATA-BUFFER LS245
16.000 MHz
OSC2
32.768 KHz
Q2
3.6V NiCd
RTC M3002 U26
FDC WD37C65B U23
VIDEO CONTROLLER PVC4 U20
IOD<0:7>
CHA<0:12>
CHD<0:7>
VMA<0:7>
VMD<0:7>
URAS
UCAS
UWE
CHAR-EPROM 2764/27128 U16
VIDEO-RAM 2 x 64Kx4 U18,19
1.8432 MHz
Q3
ACIA 8250 U23
VIDEO BUFFER LS244 U17
HD-CONTROL SIGNALS TO PAGE 1
MONITOR-TYPE DETECTION
HC373 BUFFER U15
VIDBUS<0:5>
ASIC BIGJIM
- MOUSE/GAME PORT
- I/O DECODING
- PRINTER PORT U24
V.24-TRANS-CEIVER
+12V
-12V
J5
(26/34 Pin dual row, internal)
J4
(25 Pin Sub-D female)
J3
J8
J2
J6
SERIAL PORT CONNECTOR (9 Pin Sub-D male)
MOUSE/JOYSTICK CONNECTOR (9 Pin Sub-D male)
PARALLEL PORT CONNECTOR (25 Pin Sub-D female
FLOPPY DRIVE CONNECTORS
RGB/MONO CONNECTOR (9 Pin Sub-D female)
EXT_BLK2
Schneider
DRAWN BY: H. ULLRICH
APPROVED:
TITLE: BLOCK DIAGRAM EURO XT
USED ON:
SIZE A3
51424
REV 1
DATE: 01-04-90
SHEET: 2 of 2

PARTS USED:

Ref. U	Ref. R	Ref. R	Ref. C	Ref. C	Ref. RN	Ref. T	Misc.
1	1	63	1	100	1	1	OSC 1
2	2	64	2	101	2	2	OSC 2
3	3	65	3	102	3	3	OSC 3
4	4	66	4	103	4	4	
5	5	67	5	104	5	5	
6	6	68	6A	105	6	6	
7	7		6B	106	7	7	
8	8		7A	107	8	8	Q 1
9	9		7B	108	9	9	Q 2
10	10		7C	109	10	10	Q 3
11	11		7D	110	11	11	
12	12		8	111	12	12	
13	13		9	112	13	13	
14	14		10	113			
15	15		11	114			SW 1
16	16		12	115	16		
17	17		13	116	17		
18	18		14	117	18		
19	19		15		19A		
20	20		16		19B		LS 1
21	21		17		20A		
22	22		18		20B		
23	23		19				
24	24		20A	200	Ref. JS		BAT 1
25	25		20B	201			
26	26		20C	202	1A	Ref. J	
27	27		20D	203	1B		JU 1
28	28		21	204	2	1	
29	29		22	205	3	2	
30	30		23	206	4A	3	FI 1
31	31		24A	207	4B	4	FI 2
	32		24B	208	5	5A	
	33		24C	209	6	5B	
	34		24D	210	7A	5C	
	35		25	211	7B	5D	
	36			212	7C	6	
	37			213	8	7A	
	38		28	214	9	7B	
	39		29	215	10	8	
	40		30	216	11	9	
	41			217	12	10	
	42			218	13A	11	
	43			219	13B	12A	
	44			220		12B	
	45			221		13	
	46		300	222			
	47		301	223		15A	
	48		302	224		15B	
	49		303	225	17	16A	
	50		304	226		16B	
	51		305	227			
	52		306	228			
	53		307	229			
	54		308	230		Ref. D	
	55		309	231			
	56		310	232		1	
	57		311	233		2	
	58		312	234		3	
	59		313	235		4	
	60		314	236		5	
	61					6	
	62					7	

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
1	ADVANCED ENGINEERING RELEASE	04-17-89	
2	FIRST LAYOUT	07-25-89	
3	PRODUKTION LAYOUT CHANGED FLOPPY-SELECT LINES	08-07-89	
4	ADDED FILTERS ON KEYBOARDLINES	10-06-89	

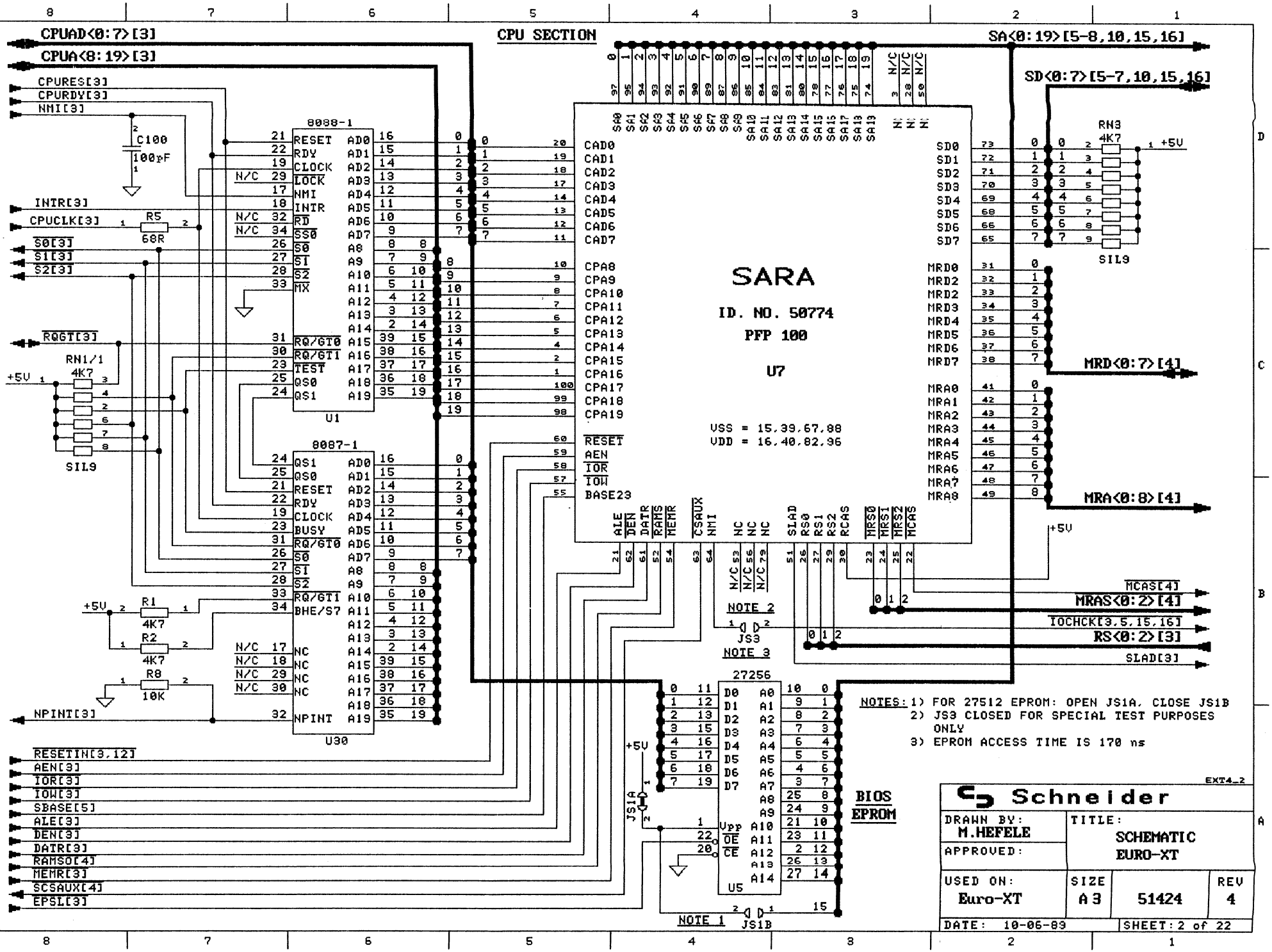
DRAWING FILES:	CONTENTS:
EXT4_1.DWG	THIS SHEET
EXT4_2.DWG	PROCESSOR,SARA
EXT4_3.DWG	FE2010A SECTION
EXT4_4.DWG	768 KB MAIN RAM
EXT4_5.DWG	ASIC 'BIGJIM'
EXT4_6.DWG	FLOPPY INTERFACE
EXT4_7.DWG	HARDDISK INTERFACE
EXT4_8.DWG	SERIAL INTERFACE
EXT4_9.DWG	REAL TIME CLOCK
EXT4_10.DWG	PVC4 VIDEO CONTROLLER
EXT4_11.DWG	VIDEO RAM, CHAR. ROM
EXT4_12.DWG	KEYBOARD INTERFACE
EXT4_13.DWG	CONNECTORS I
EXT4_14.DWG	CONNECTORS II
EXT4_15.DWG	CONNECTORS III
EXT4_16.DWG	VGA ERWEITERUNGSSLOT
EXT4_17.DWG	JOYSTICK INTERFACE
EXT4_18.DWG	BLOCK CAPS
EXT4_19.dwg	BUS-BOARD MAIN CONNECTOR
EXT4_20.dwg	BUS-BOARD SLOT-1
EXT4_21.dwg	BUS-BOARD SLOT-2
EXT4_22.dwg	BUS-BOARD PWR, LED PANEL

EXT4_1

Schneider

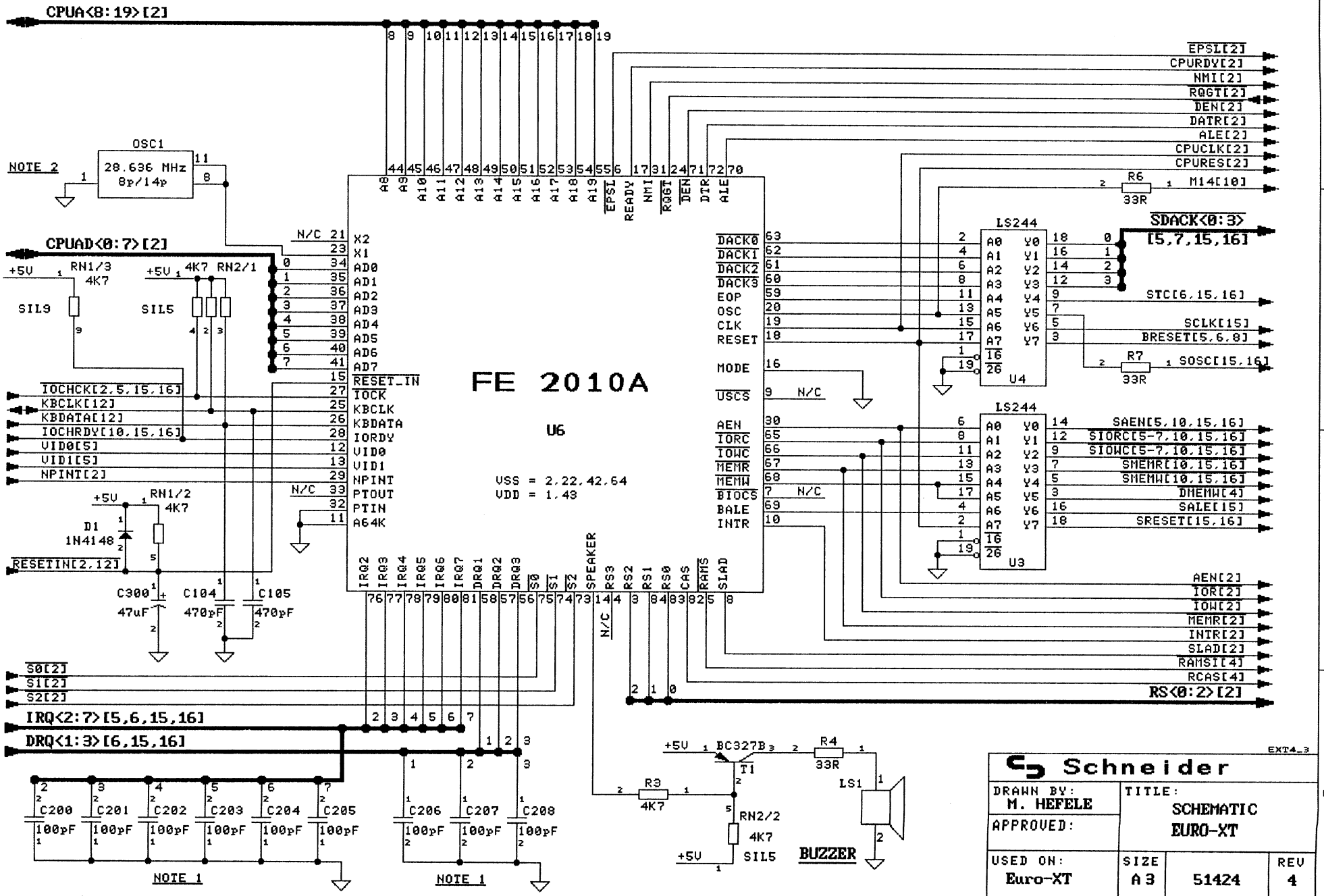
DRAWN BY: M. HEFELE	TITLE: SCHEMATIC *EURO-XT*		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 11-27-89	SHEET: 1 of 22		

68


CPU SECTION
CPUAD<0:7>[3]
CPUA<8:19>[3]
CPURES[3]
CPURDY[3]
NMI[3]
C100
100pF
INTR[3]
CPUCLK[3]
R5
68R
S0[3]
S1[3]
S2[3]
RQGT[3]
RN1/1
4K7
SIL9
R1
4K7
R2
4K7
R8
10K
NPINT[3]
8088-1
RESET
RDY
CLOCK
LOCK
NMI
INTR
RD
SSO
S0
S1
S2
MX
RQ/GT0
RQ/GT1
TEST
QS0
QS1
AD0
AD1
AD2
AD3
AD4
AD5
AD6
AD7
A8
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
A19
U1
8087-1
BHE/S7
NC
U30
SARA
ID. NO. 50774
PFP 100
U7
VSS = 15,39,67,88
VDD = 16,40,82,96
CAD0
CAD1
CAD2
CAD3
CAD4
CAD5
CAD6
CAD7
CPA8
CPA9
CPA10
CPA11
CPA12
CPA13
CPA14
CPA15
CPA16
CPA17
CPA18
CPA19
RESET
AEN
IOR
IOW
BASE23
SD0
SD1
SD2
SD3
SD4
SD5
SD6
SD7
MRD0
MRD1
MRD2
MRD3
MRD4
MRD5
MRD6
MRD7
MRA0
MRA1
MRA2
MRA3
MRA4
MRA5
MRA6
MRA7
MRA8
ALE
DEN
DATR
RAMS
MEMR
CSAUX
NMI
SLAD
RS0
RS1
RS2
RCAS
MRS0
MRS1
MRS2
MCAS
NOTE 2
JS3
NOTE 3
SA<0:19>[5-8,10,15,16]
SD<0:7>[5-7,10,15,16]
RN3
4K7
SIL9
MRD<0:7>[4]
MRA<0:8>[4]
MCAS[4]
MRAS<0:2>[4]
IOCHCK[3,5,15,16]
RS<0:2>[3]
SLAD[3]
27256
D0
D1
D2
D3
D4
D5
D6
D7
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
Vpp
OE
CE
U5
JS1A
JS1B
NOTE 1
BIOS EPROM
NOTES: 1) FOR 27512 EPROM: OPEN JS1A, CLOSE JS1B
2) JS3 CLOSED FOR SPECIAL TEST PURPOSES ONLY
3) EPROM ACCESS TIME IS 170 ns
RESETIN[3,12]
AEN[3]
IOR[3]
IOW[3]
SBASE[5]
ALE[3]
DEN[3]
DATR[3]
RAMSO[4]
MEMR[3]
SCSAUX[4]
EPSL[3]
EXT4_2
Schneider
DRAWN BY: M.HEFELE
APPROVED:
TITLE: SCHEMATIC EURO-XT
USED ON: Euro-XT
SIZE A3
51424
REV 4
DATE: 10-06-89
SHEET: 2 of 22

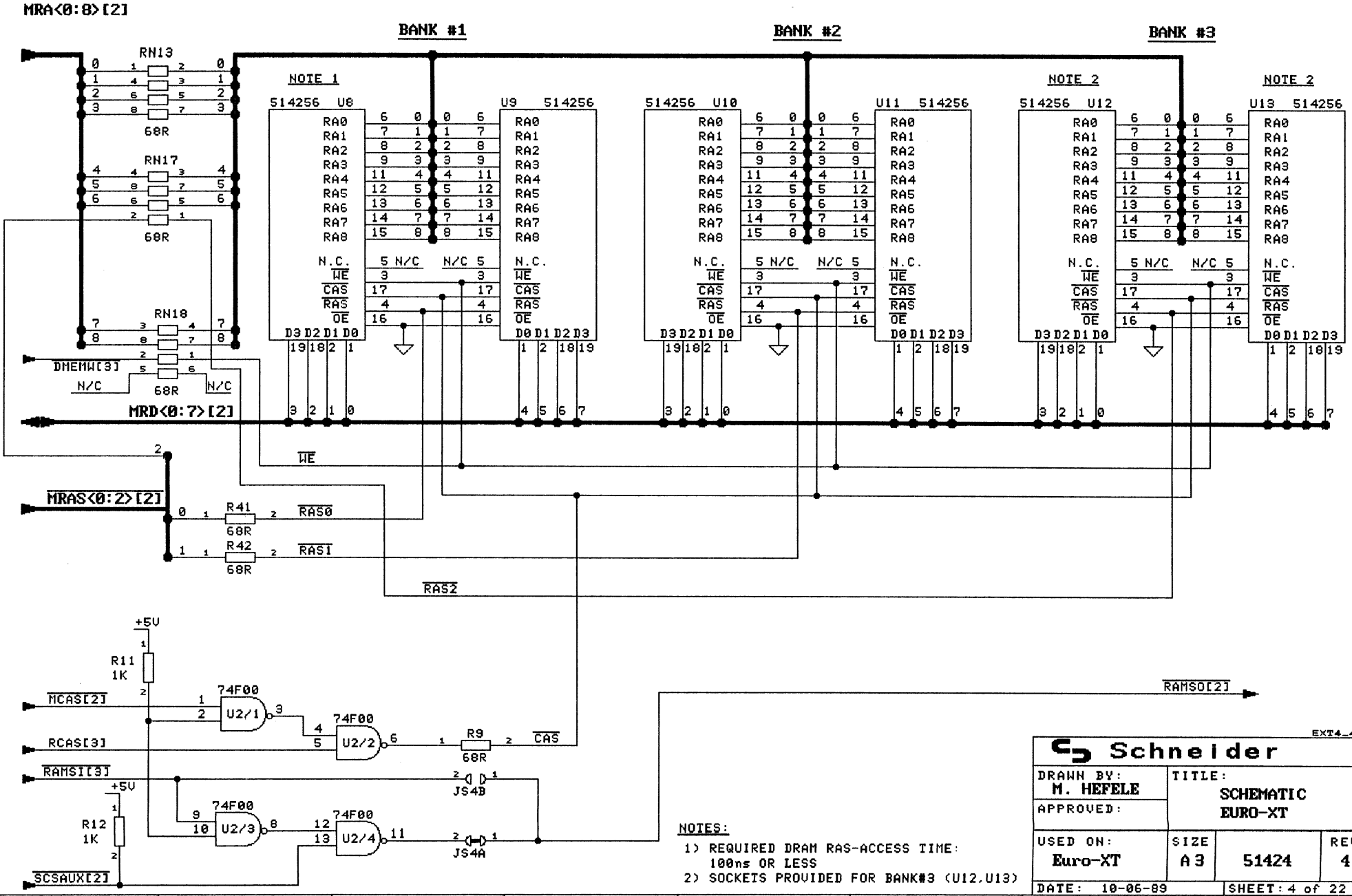
CPU CONTROLLER

NOTES: 1) C200-C208 ONLY ASSEMBLED IF REQUIRED!
2) OSC1 HAS 8p OR 14p HOUSING



Schneider			EXT4_3
DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 3 of 22		

512K (768K) MAIN RAM



NOTES:

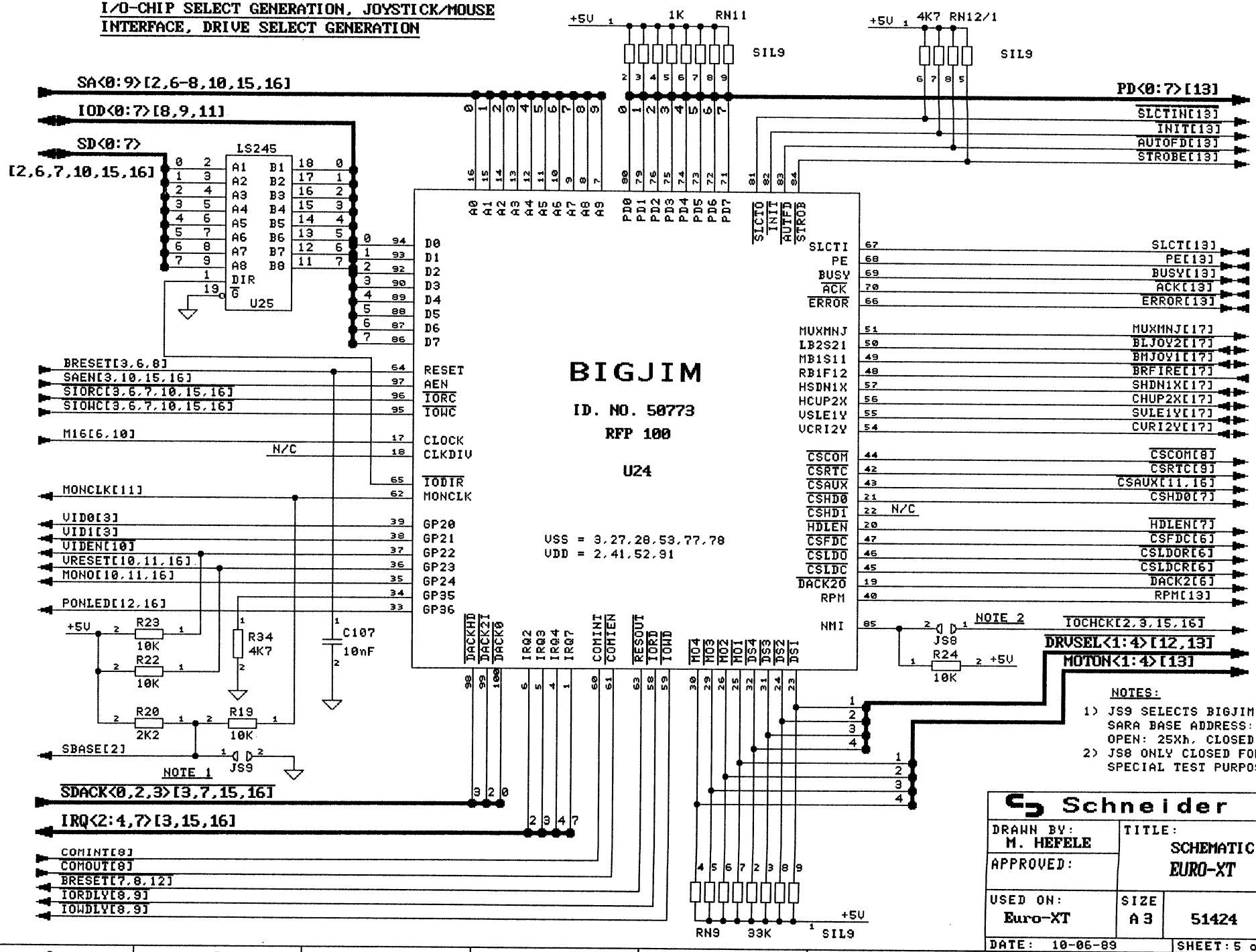
1) REQUIRED DRAM RAS-ACCESS TIME: 100ns OR LESS
2) SOCKETS PROVIDED FOR BANK#3 (U12,U13)

EXT4_4

Schneider

DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 4 of 22		

I/O-CHIP SELECT GENERATION, JOYSTICK/MOUSE INTERFACE, DRIVE SELECT GENERATION



NOTES:

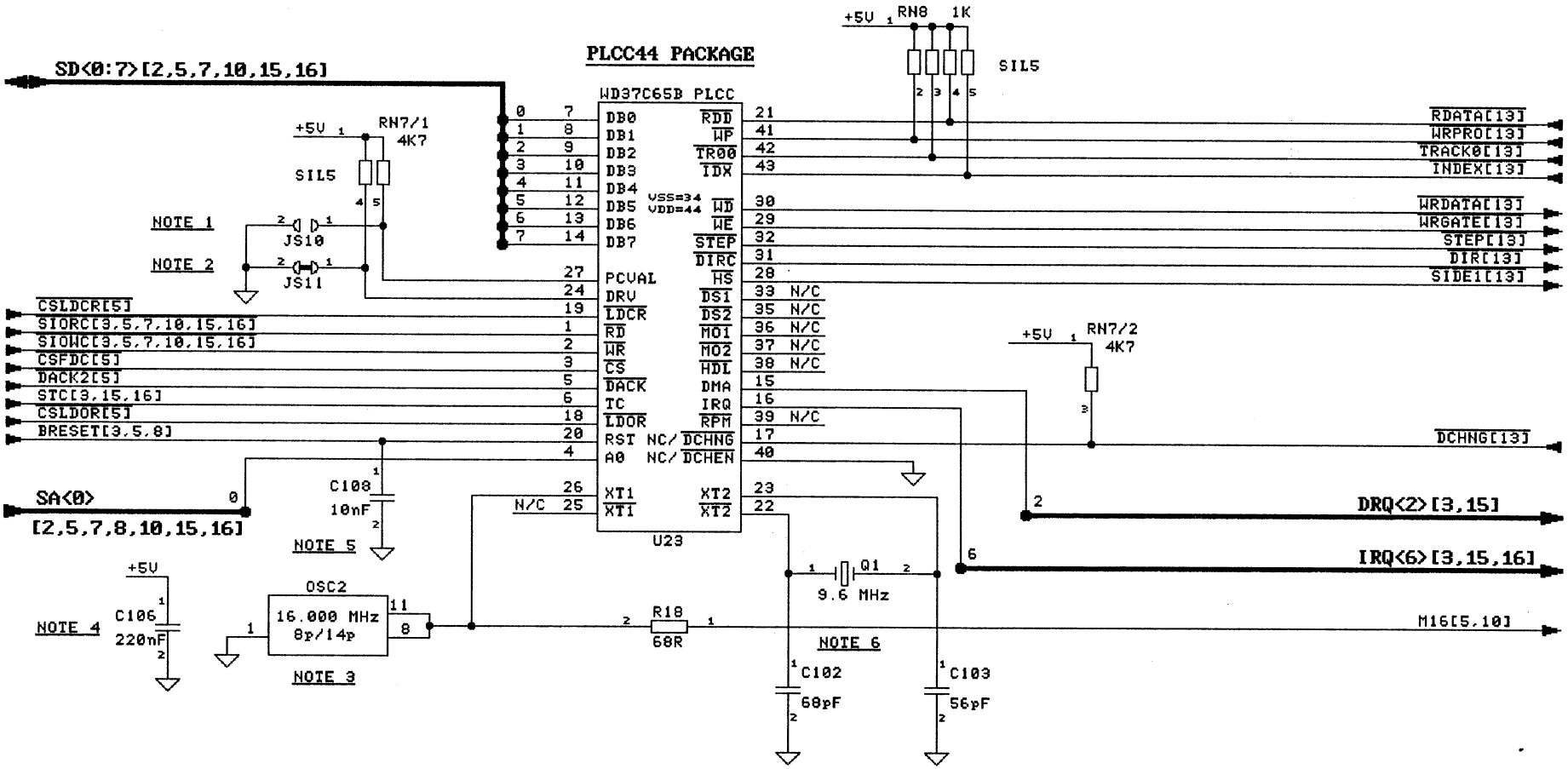
1) JS9 SELECTS BIGJIM AND SARA BASE ADDRESS: OPEN: 25Xh, CLOSED: 35Xh
2) JS8 ONLY CLOSED FOR SPECIAL TEST PURPOSES

EXT4_5

Schneider

DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 5 of 22		

FLOPPY DISK CONTROLLER

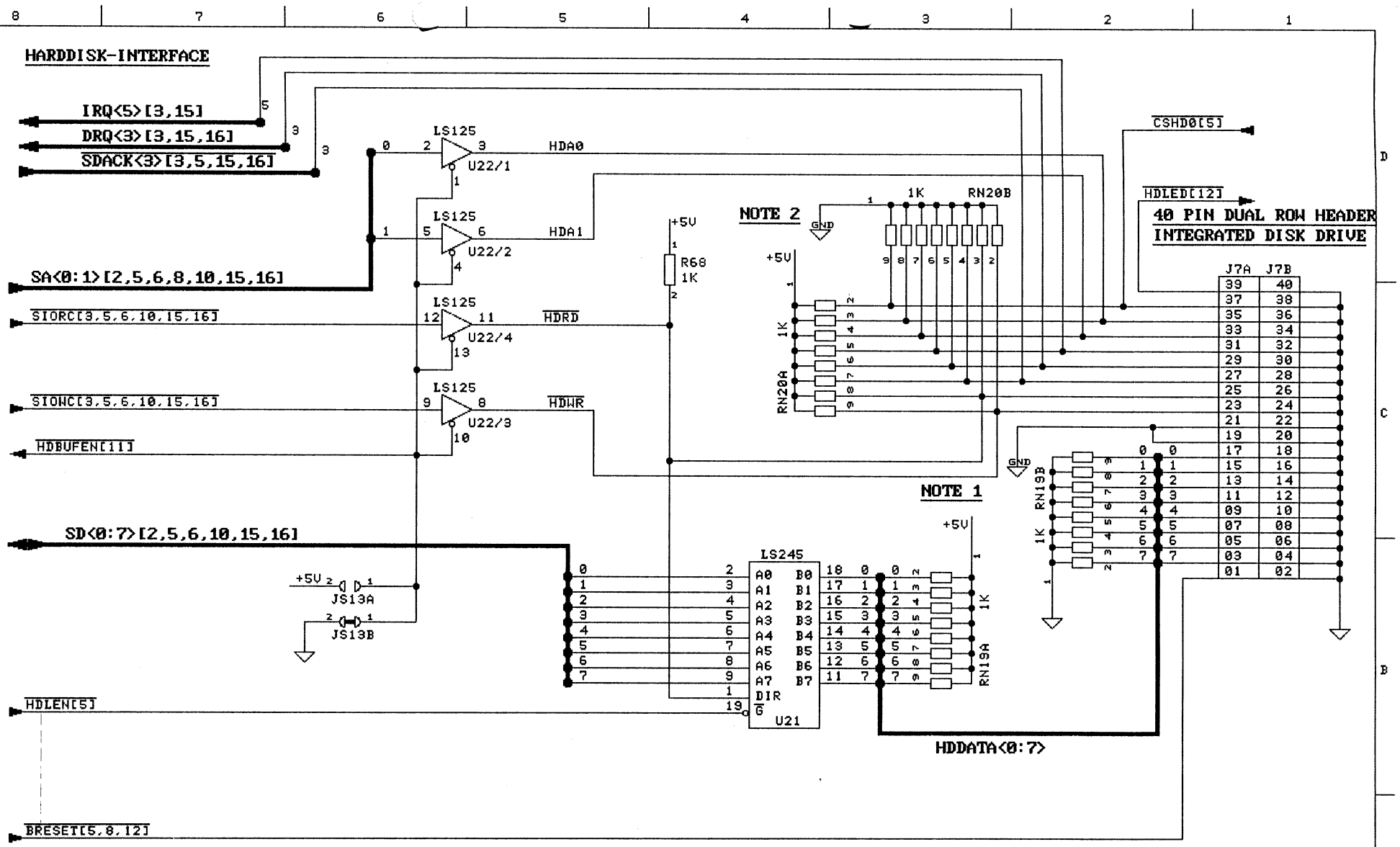


NOTES: 1) JS10 SELECTS WRITE PRECOMP. VAL.:
JS10 OPEN : 125 ns
JS10 CLOSED: 187 ns
2) JS11 SELECTS 2 SPEED SPINDLE DRIVE
IF CLOSED
3) OSCILLATOR +- 100 ppm, CMOS OUTPUT, 8p OR 14p HOUSING
4) C106 IS BLOCK CAP FOR OSC2
5) C108 IS REQUIRED FOR WD37C65B TYPE
FDC CONTROLLERS, LOCATED NEAR U23.
6) C102,C103,Q1 normally are not assembled.

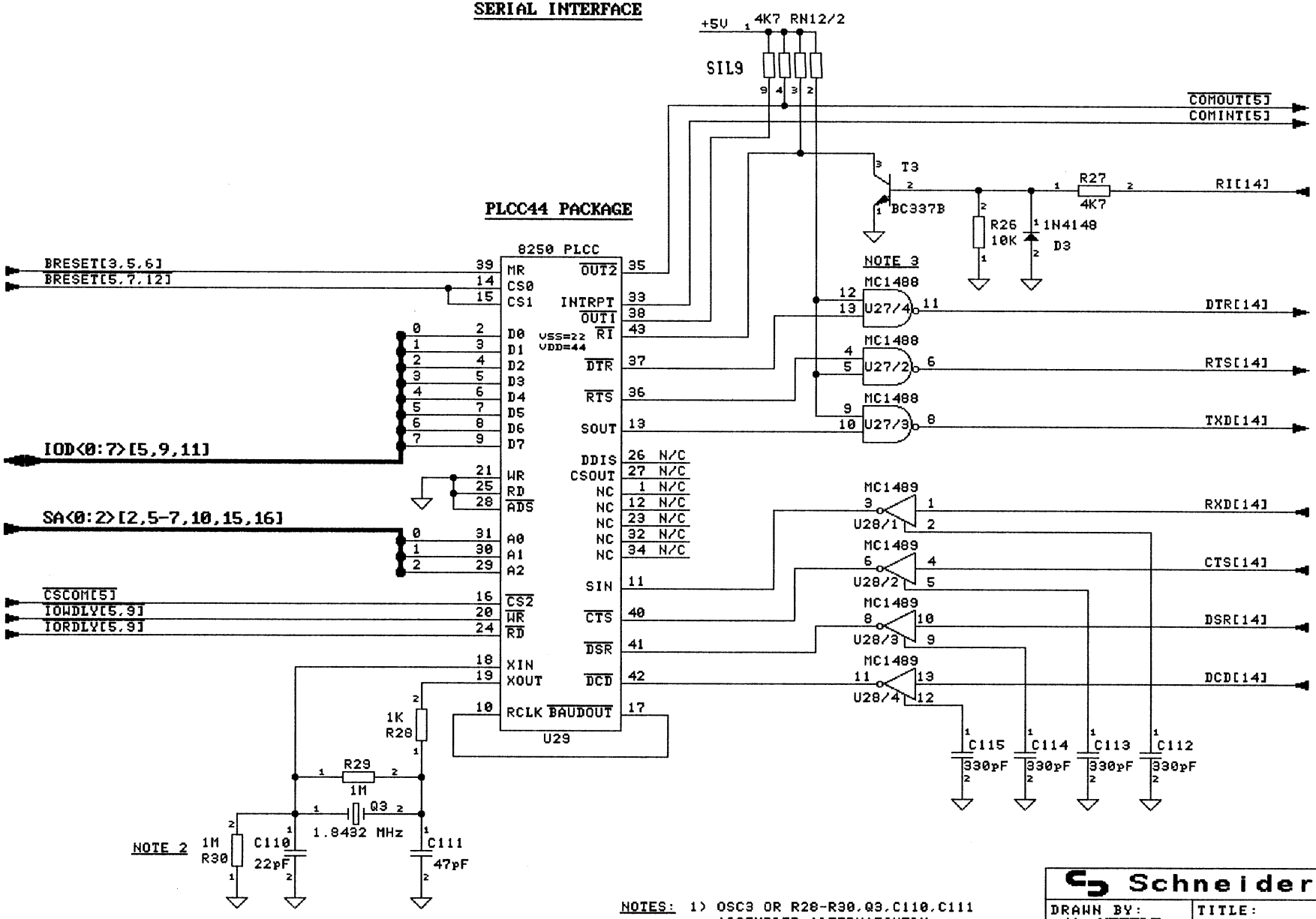
EXT4_6

Schneider

DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 6 of 22		


HARDDISK-INTERFACE
IRQ<5>[3,15]
DRQ<3>[3,15,16]
SDACK<3>[3,5,15,16]
SA<0:1>[2,5,6,8,10,15,16]
SIORC[3,5,6,10,15,16]
SIOWC[3,5,6,10,15,16]
HDBUFEN[11]
SD<0:7>[2,5,6,10,15,16]
HDLEN[5]
BRESET[5,8,12]
LS125
U22/1
U22/2
U22/4
U22/3
HDA0
HDA1
HDRD
HDWR
R68
1K
+5V
NOTE 2
RN20B
RN20A
GND
CSHD0[5]
HDLED[12]
40 PIN DUAL ROW HEADER
INTEGRATED DISK DRIVE
J7A J7B
NOTE 1
RN19B
RN19A
LS245
U21
DIR
JS13A
JS13B
HDDATA<0:7>
NOTES:
1) RN19A and RN19B can not be mounted simultaneously because they use the same holes
2) R20A and RN20B can not be mounted simultaneously because they use the same holes
Schneider
EXT4_7
DRAWN BY: M. HEFELE
APPROVED:
TITLE: SCHEMATIC EURO-XT
USED ON: Euro-XT
SIZE A3
51424
REV 4
DATE: 10-06-89
SHEET: 7 of 22

SERIAL INTERFACE



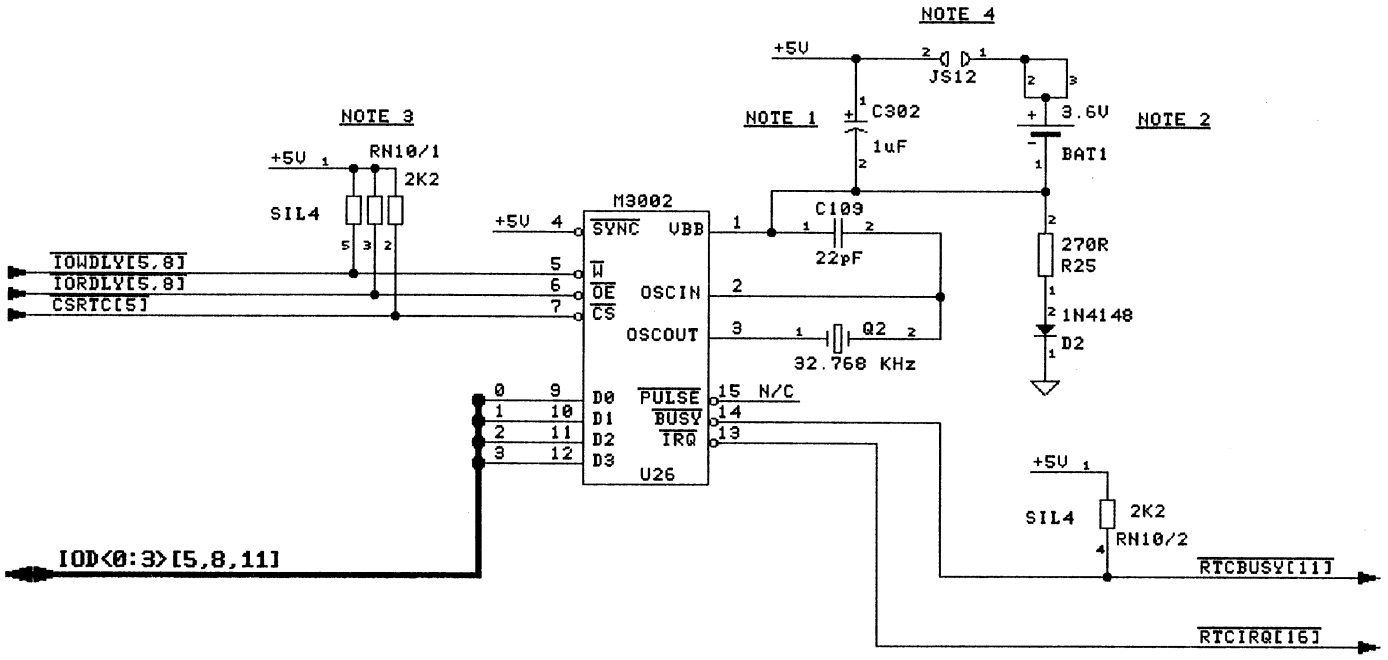
NOTES:
1) OSC3 OR R28-R30,Q3,C110,C111 ASSEMBLED ALTERNATIVELY
2) R30 ASSEMBLED ONLY IF REQUIRED
3) U27 HAS SPECIAL POWER PINS:
+12V = PIN 14
-12V = PIN 1
GND = PIN 7

EXT4_8

Schneider

DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 8 of 22		

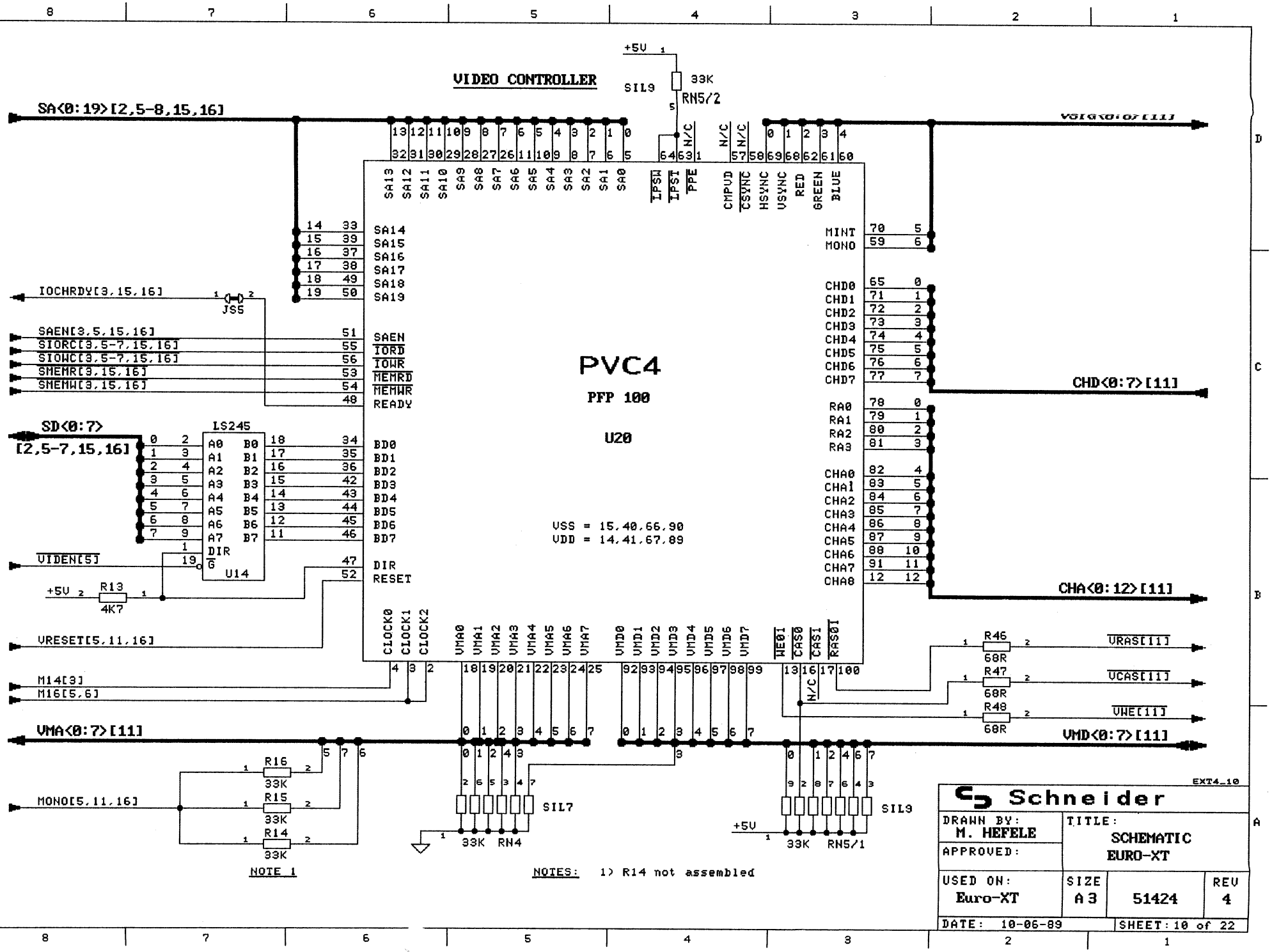
REAL TIME CLOCK



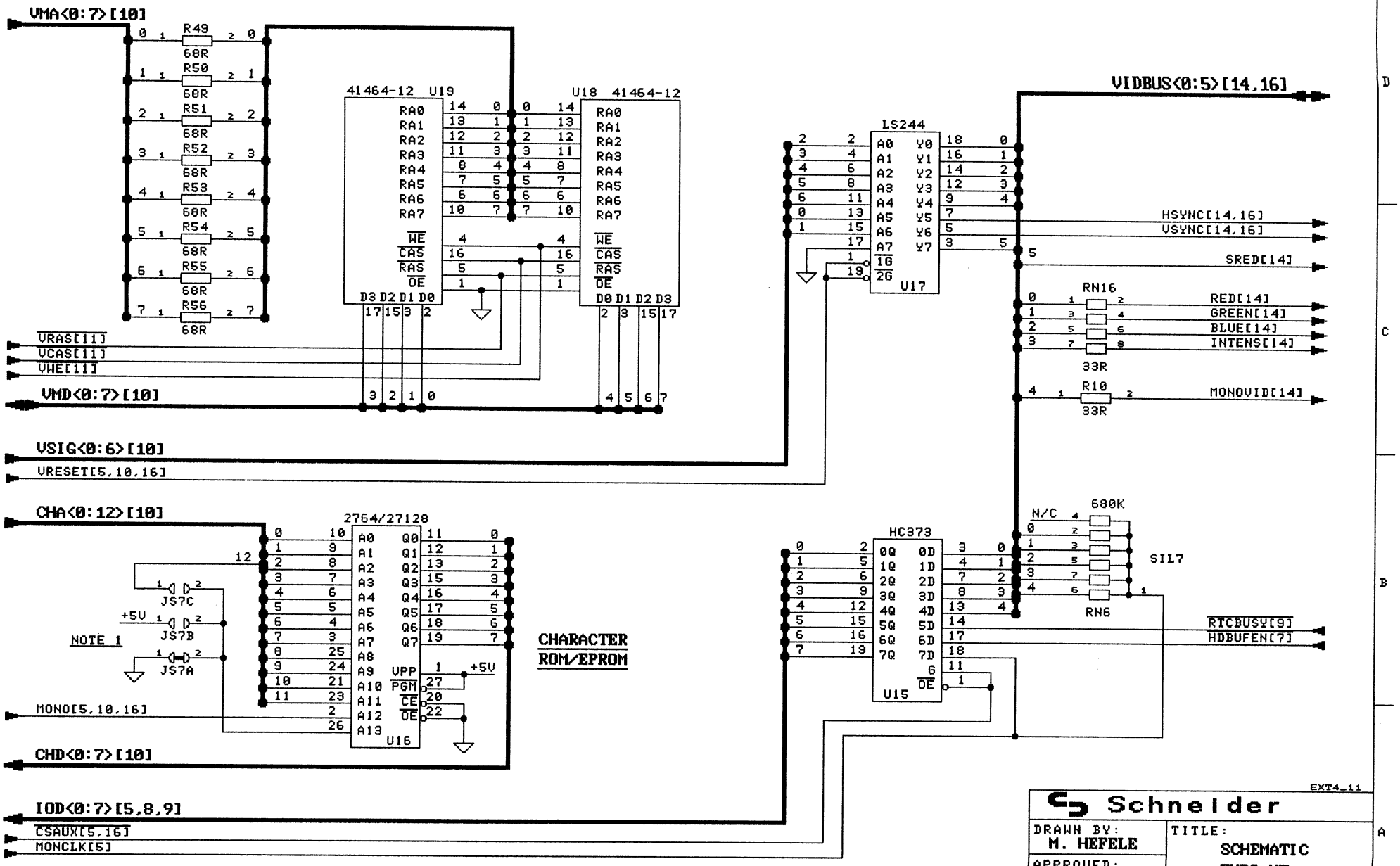
NOTES: 1) C302 IS A TANTAL TYPE
IT IS ONLY ASSEMBLED IF REQUIRED.
2) BAT1 IS A NiCd ACCU WITH 60mAh CAPACITY
3) RN10 ONLY ASSEMBLED IF REQUIRED
4) JS12 MUST BE CLOSED AFTER ASSEMBLY OF BAT1

EXT4_9

Schneider			
DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89		SHEET: 9 of 22	


VIDEO CONTROLLER
PVC4
PFP 100
U20
VSS = 15,40,66,90
VDD = 14,41,67,89
SA<0:19>[2,5-8,15,16]
SD<0:7>
[2,5-7,15,16]
VMA<0:7>[11]
VMD<0:7>[11]
CHD<0:7>[11]
CHA<0:12>[11]
VSIG<0:7>[11]
IOCHRDY[3,15,16]
SAEN[3,5,15,16]
SIORC[3,5-7,15,16]
SIOWC[3,5-7,15,16]
SMEMR[3,15,16]
SMEMW[3,15,16]
VIDEN[5]
VRESET[5,11,16]
M14[3]
M16[5,6]
MONO[5,11,16]
VRAS[11]
VCAS[11]
VWE[11]
+5V
33K
RN5/2
SIL9
JS5
LS245
U14
R13
4K7
R16
R15
R14
33K
SIL7
RN4
RN5/1
R46
R47
R48
60R
NOTE 1
NOTES: 1) R14 not assembled
Schneider
DRAWN BY: M. HEFELE
APPROVED:
TITLE: SCHEMATIC EURO-XT
USED ON: Euro-XT
SIZE A3
51424
REV 4
DATE: 10-06-89
SHEET: 10 of 22
EXT4_10

VIDEO RAM, CHARACTER EPROM, VIDEO BUFFER



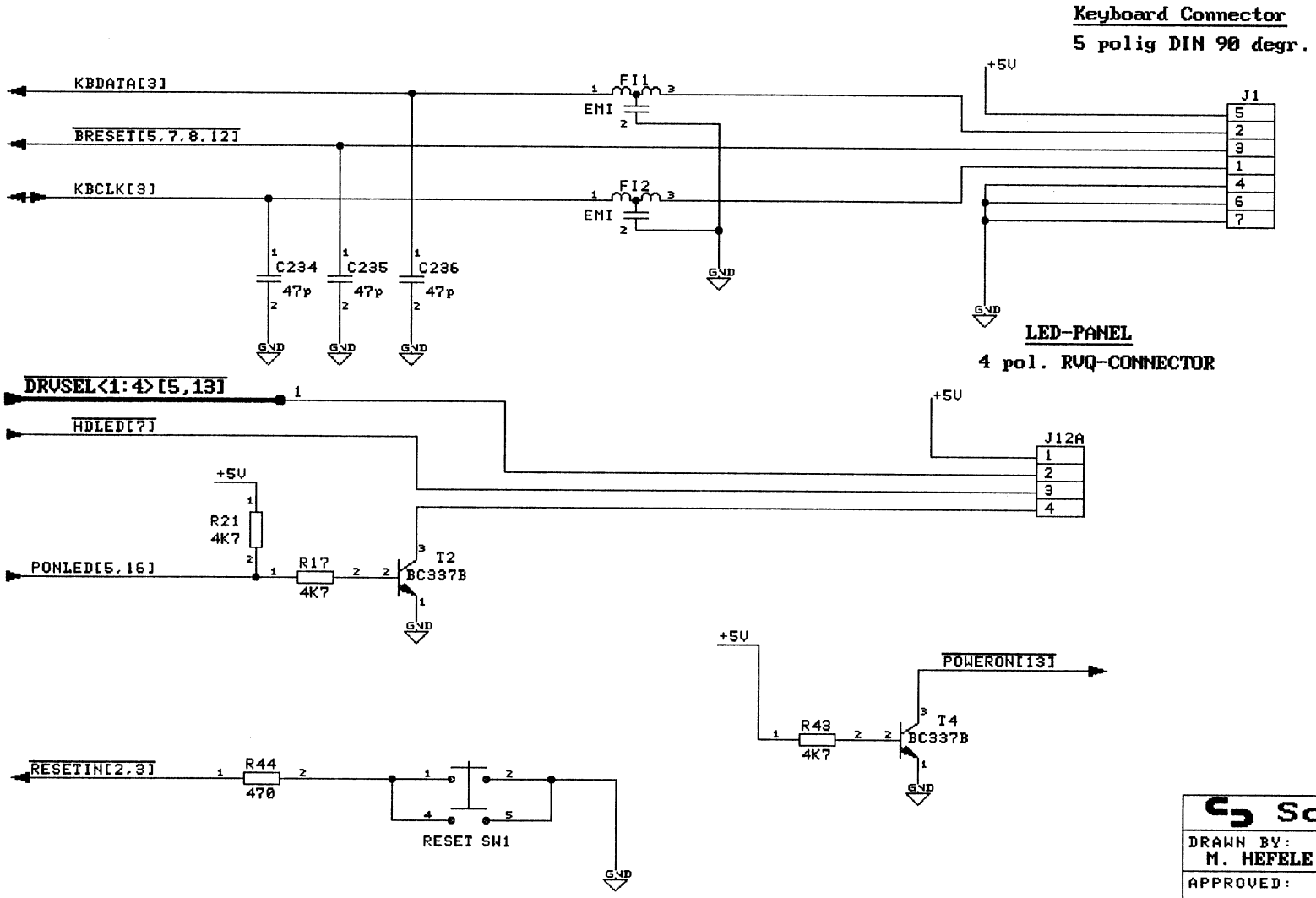
NOTES: 1) JS7A,B,C HAVE EFFECT ONLY IF 27128 ROM/EPROM IS USED!
IN THIS CASE AN ALTERNATE MONO/COLOR CHARACTER SET CAN BE SELECTED:
JS7A CLOSED: NORMAL CHARSET ACTIVE
JS7B CLOSED: ALTERNATE CHARSET ACTIVE
JS7C CLOSED: SELECTION BY SOFTWARE

EXT4_11

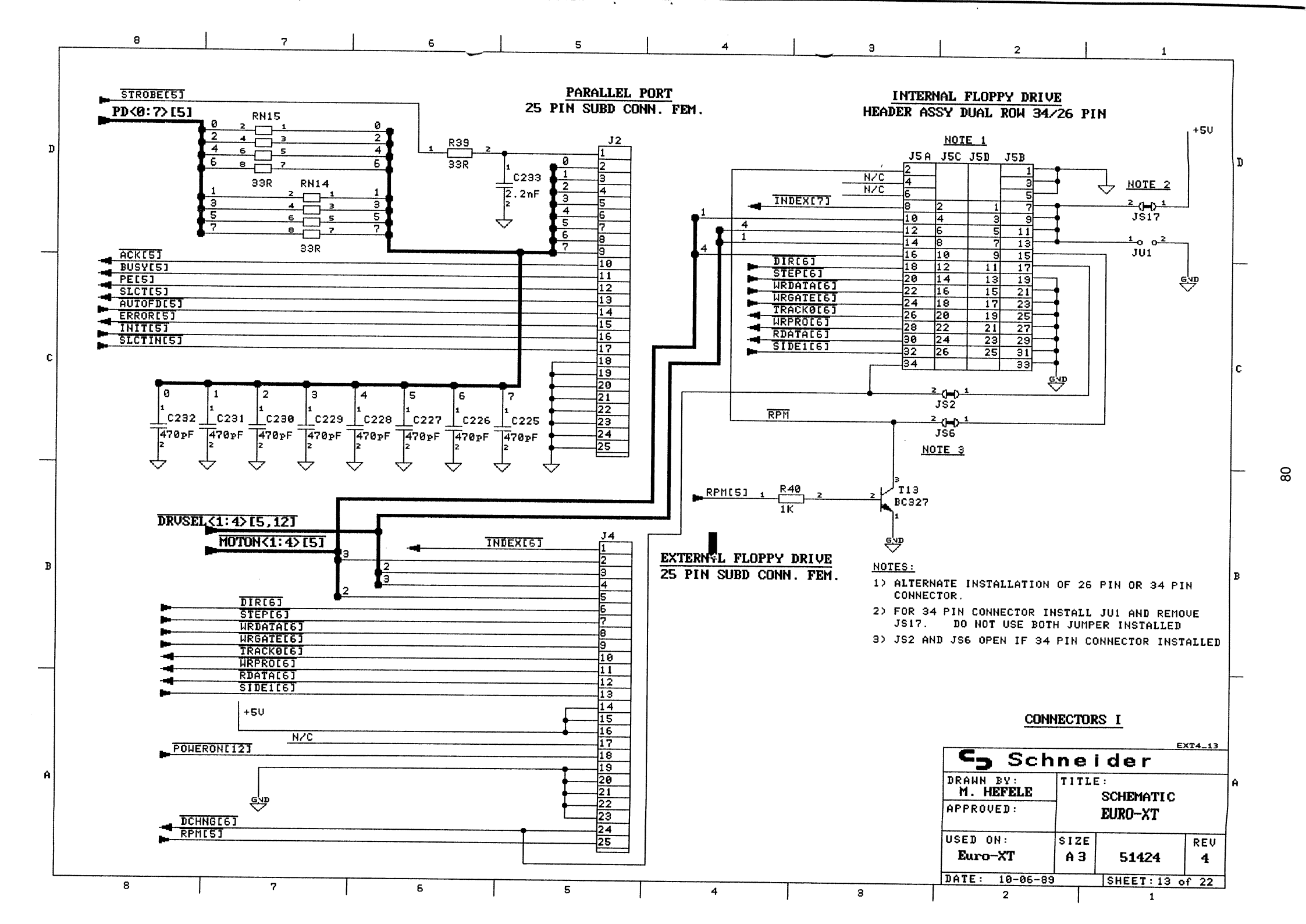
Schneider

DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 11 of 22		

KEYBOARD INTERFACE , RESET BUTTON, POWER-LED, HDU-LED

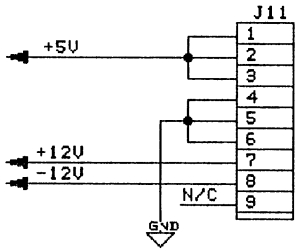


Schneider			XT4_12
DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 12 of 22		


PARALLEL PORT
25 PIN SUBD CONN. FEM.
INTERNAL FLOPPY DRIVE
HEADER ASSY DUAL ROW 34/26 PIN
EXTERNAL FLOPPY DRIVE
25 PIN SUBD CONN. FEM.
STROBE[5]
PD<0:7>[5]
RN15
RN14
33R
R39
C233
2.2nF
J2
ACK[5]
BUSY[5]
PE[5]
SLCT[5]
AUTOFD[5]
ERROR[5]
INIT[5]
SLCTIN[5]
C232 C231 C230 C229 C228 C227 C226 C225
470pF
DRVSEL<1:4>[5,12]
MOTON<1:4>[5]
J4
INDEX[6]
DIR[6]
STEP[6]
WRDATA[6]
WRGATE[6]
TRACK0[6]
WRPRO[6]
RDATA[6]
SIDE1[6]
+5V
N/C
POWERON[12]
GND
DCHNG[6]
RPM[5]
NOTE 1
J5A J5C J5D J5B
INDEX[7]
DIR[6]
STEP[6]
WRDATA[6]
WRGATE[6]
TRACK0[6]
WRPRO[6]
RDATA[6]
SIDE1[6]
NOTE 2
JS17
JU1
JS2
JS6
NOTE 3
RPM
RPM[5]
R40
1K
T13
BC327
NOTES:
1) ALTERNATE INSTALLATION OF 26 PIN OR 34 PIN CONNECTOR.
2) FOR 34 PIN CONNECTOR INSTALL JU1 AND REMOVE JS17. DO NOT USE BOTH JUMPER INSTALLED
3) JS2 AND JS6 OPEN IF 34 PIN CONNECTOR INSTALLED
CONNECTORS I
EXT4_13
Schneider
DRAWN BY: M. HEFELE
APPROVED:
TITLE: SCHEMATIC EURO-XT
USED ON: Euro-XT
SIZE A3
51424
REV 4
DATE: 10-06-89
SHEET: 13 of 22

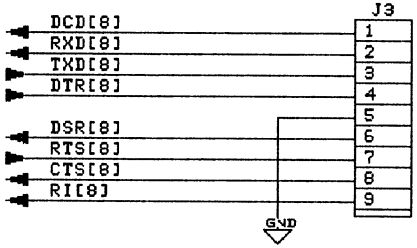
POWER INPUT

9 pol. single row
3.96 spacing



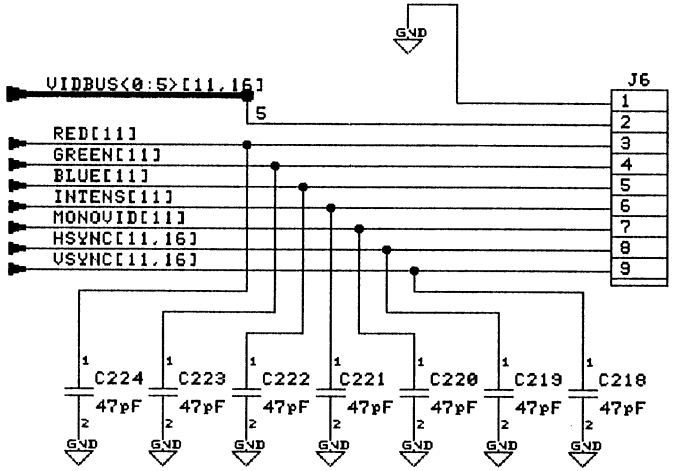
SERIAL PORT

9 PIN SUBD CONN. MALE



VIDEO MONO/RGB

9 PIN SUBD CONN. FEMALE



CONNECTORS II

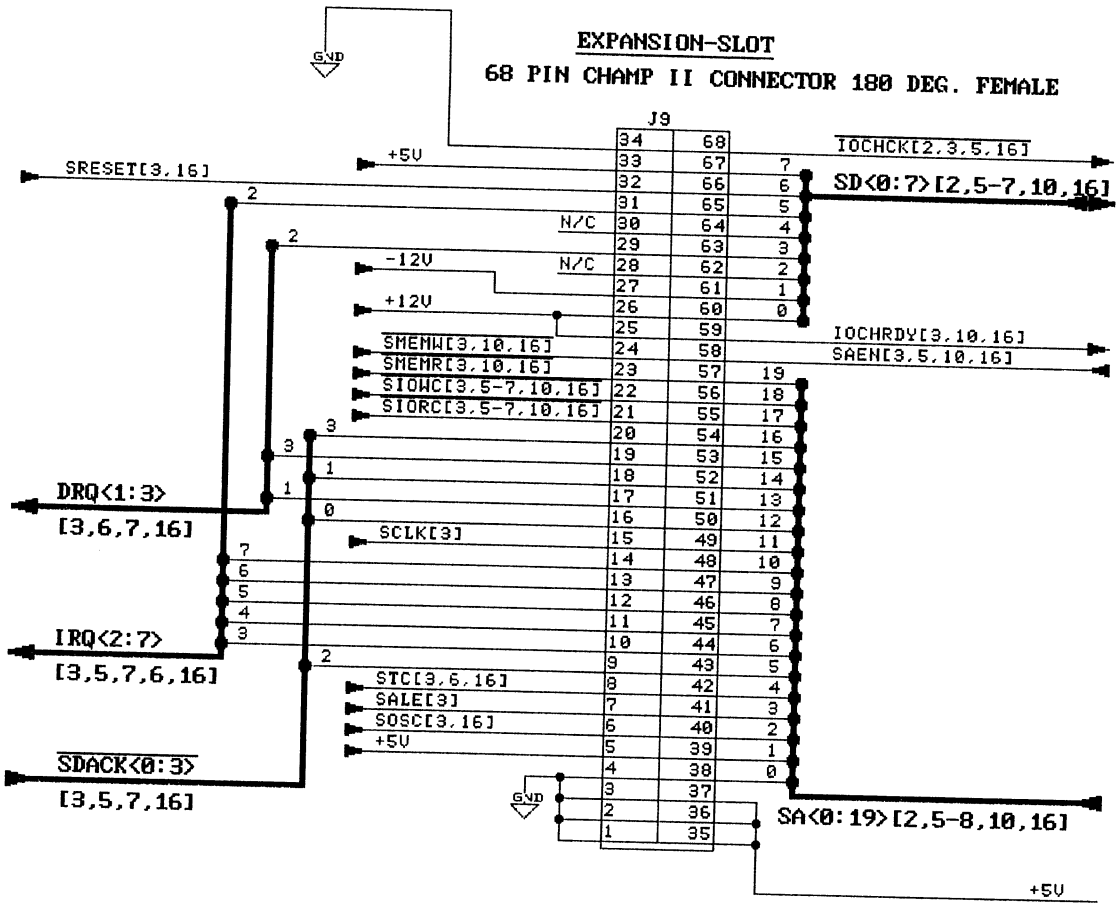
EXT4_14

Schneider			
DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 14 of 22		

81

EXPANSION-SLOT

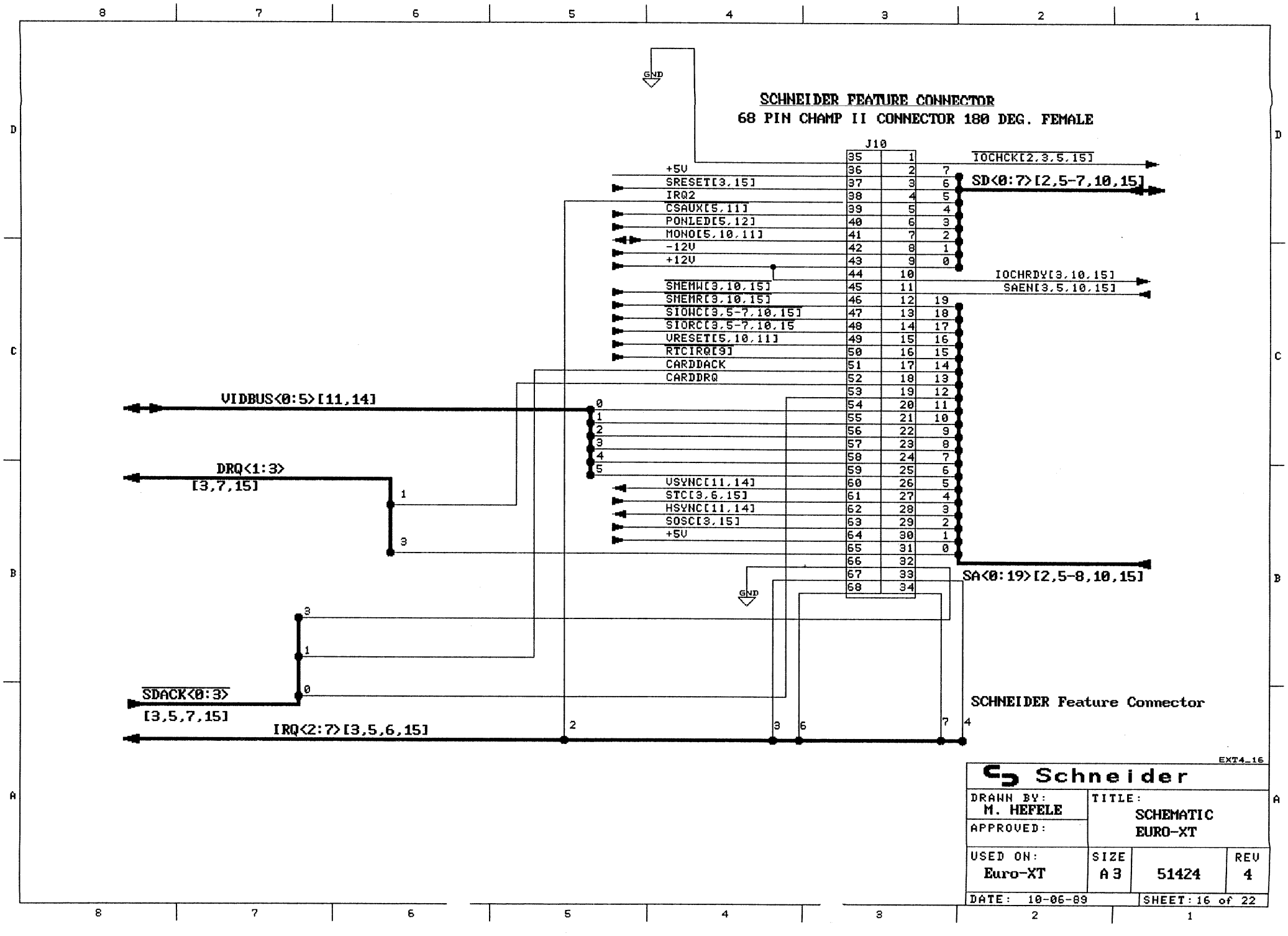
68 PIN CHAMP II CONNECTOR 180 DEG. FEMALE

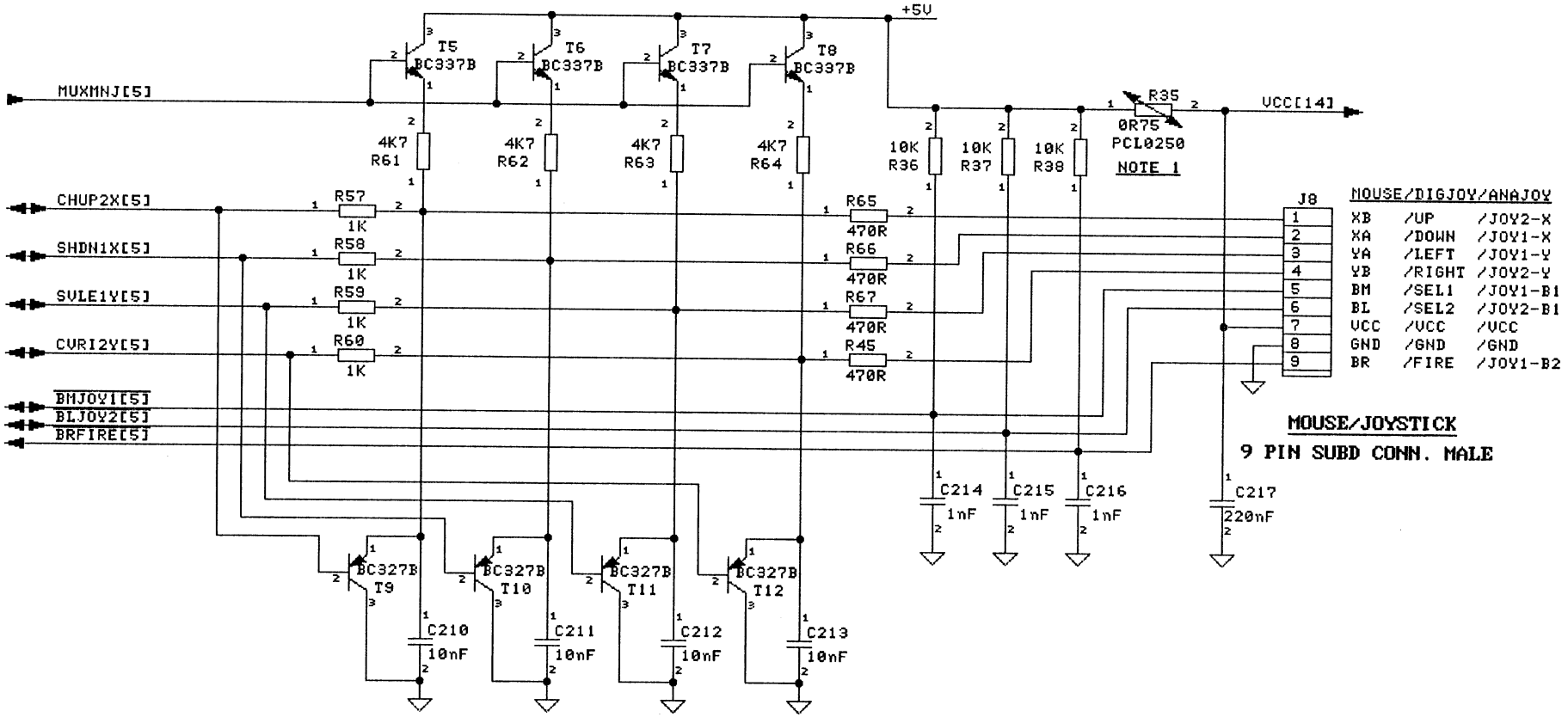


CONNECTORS III

EXT4_15

Schneider			
DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 15 of 22		


SCHNEIDER FEATURE CONNECTOR
68 PIN CHAMP II CONNECTOR 180 DEG. FEMALE
J10
GND
+5V
SRESET[3,15]
IRQ2
CSAUX[5,11]
PONLED[5,12]
MONO[5,10,11]
-12V
+12V
SMEMW[3,10,15]
SMEMR[3,10,15]
SIOWC[3,5-7,10,15]
SIORC[3,5-7,10,15
VRESET[5,10,11]
RTCIRQ[9]
CARDDACK
CARDDRQ
VSYNC[11,14]
STC[3,6,15]
HSYNC[11,14]
SOSC[3,15]
+5V
GND
IOCHCK[2,3,5,15]
SD<0:7>[2,5-7,10,15]
IOCHRDY[3,10,15]
SAEN[3,5,10,15]
SA<0:19>[2,5-8,10,15]
VIDBUS<0:5>[11,14]
DRQ<1:3>
[3,7,15]
SDACK<0:3>
[3,5,7,15]
IRQ<2:7>[3,5,6,15]
SCHNEIDER Feature Connector
EXT4_16
Schneider
DRAWN BY: M. HEFELE
APPROVED:
TITLE: SCHEMATIC EURO-XT
USED ON: Euro-XT
SIZE A3
51424
REV 4
DATE: 10-06-89
SHEET: 16 of 22



JOYSTICK INTERFACE

NOTES: 1) R35 IS A PTC RESISTOR FOR CURRENT LIMITATION

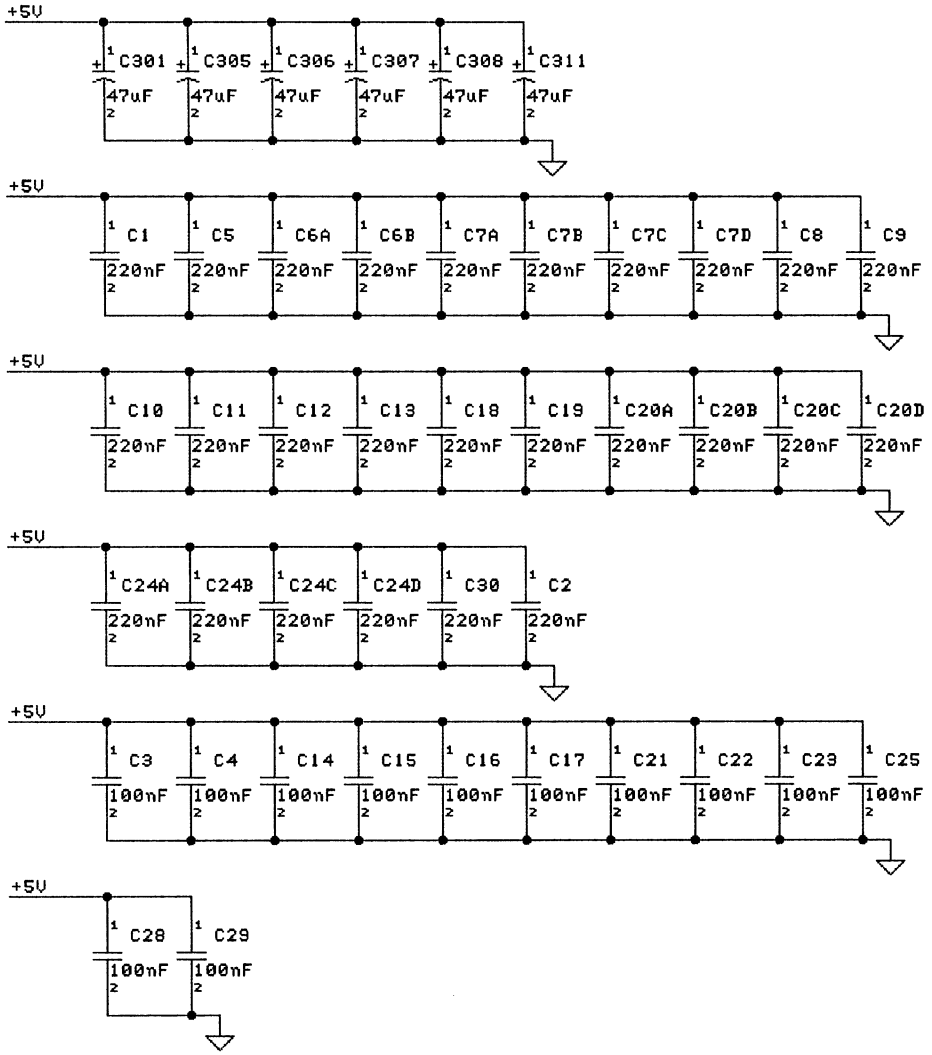
EXT4_17

Schneider

DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 17 of 22		

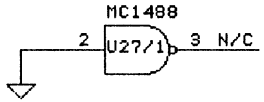
BLOCK CAPS +5V:

9 x 47uF/16V
26 x 0.22uF
12 x 0.1uF



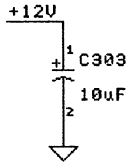
NOTE: BLOCK CAPS ONLY ASSEMBLED IF REQUIRED

SPARE GATES:



BLOCK CAPS +12V

10uF/25V

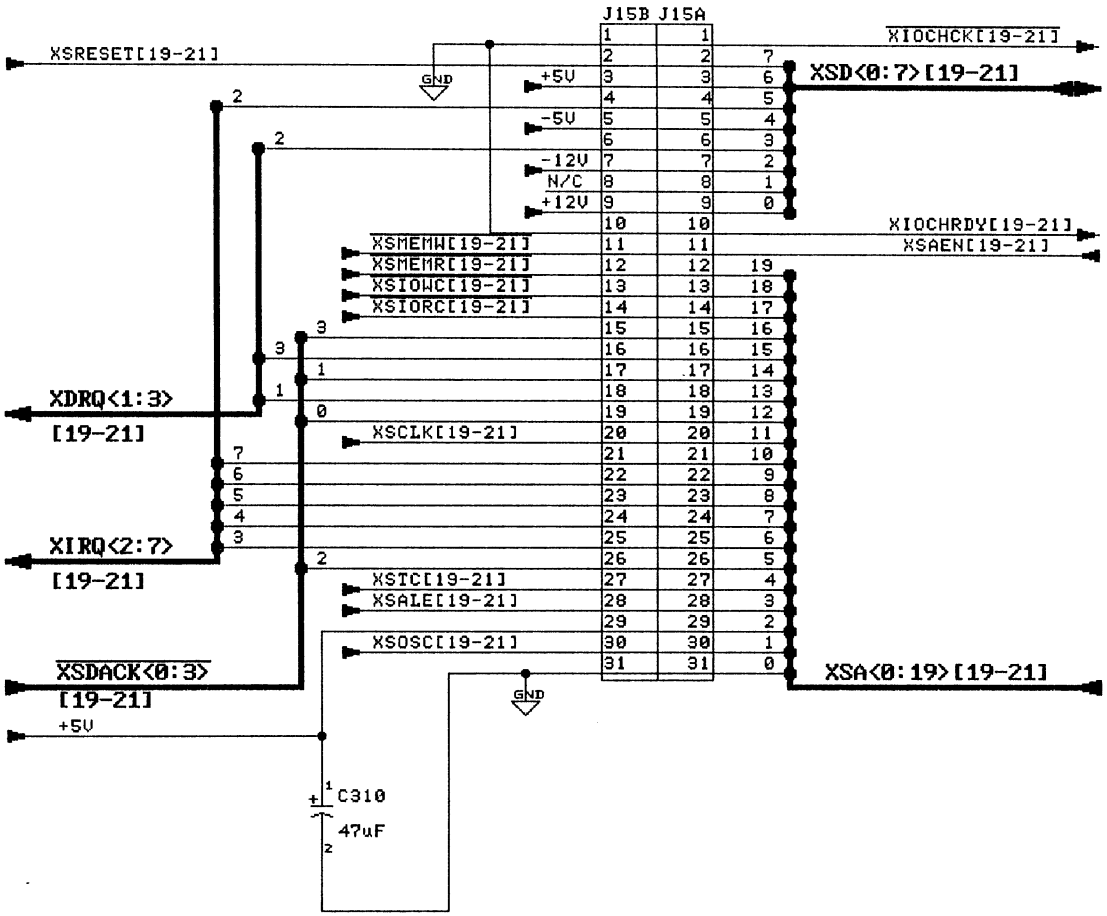


BLOCK CAPS, SPARE GATES

EXT4_18

Schneider

DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 4
DATE: 10-06-89	SHEET: 18 of 22		



EXPANSION SLOT 1

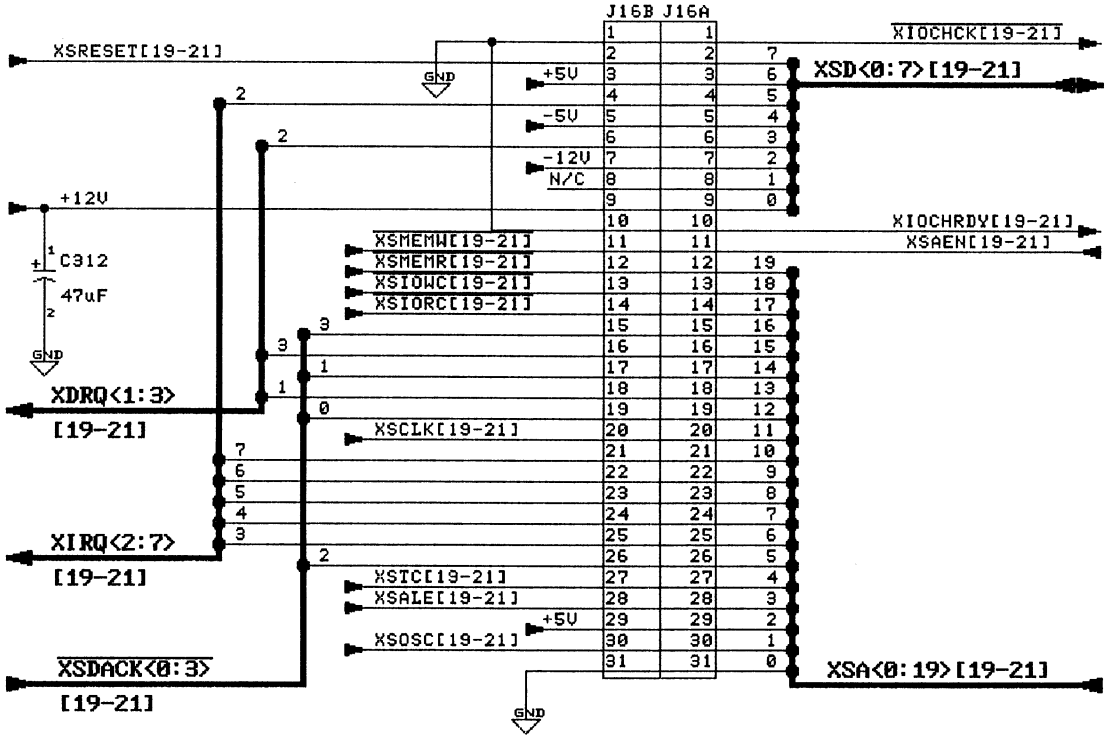
EXT4_20

Schneider

DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51428	REV 4
DATE: 10-06-89	SHEET: 20 of 22		

EXPANSION SLOT

62 PIN CARDEDGE CONN.

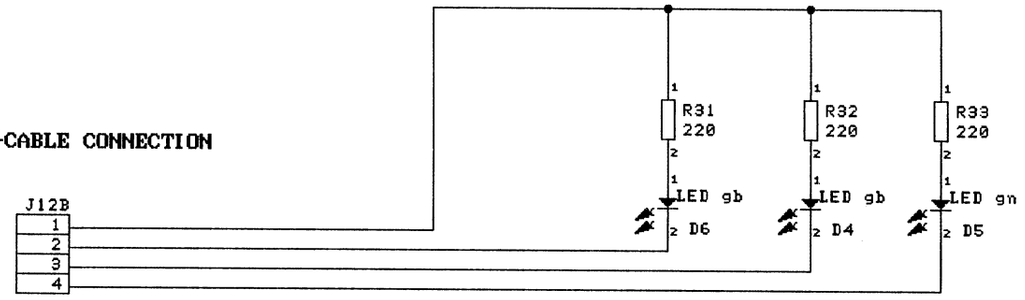


EXPANSION SLOT 2

EXT4_21

Schneider			
DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51428	REV 4
DATE: 10-06-89	SHEET: 21 of 22		

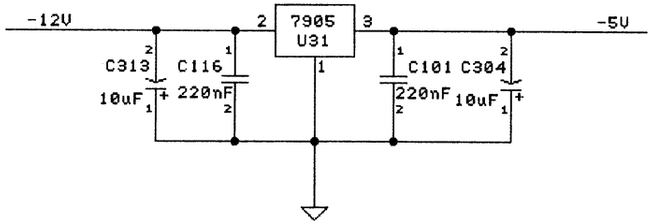
LED-Panel XT



Note:

The LED-Panel is manufactured as a part of the mainboard. The interconnections are made with a wirejumper.

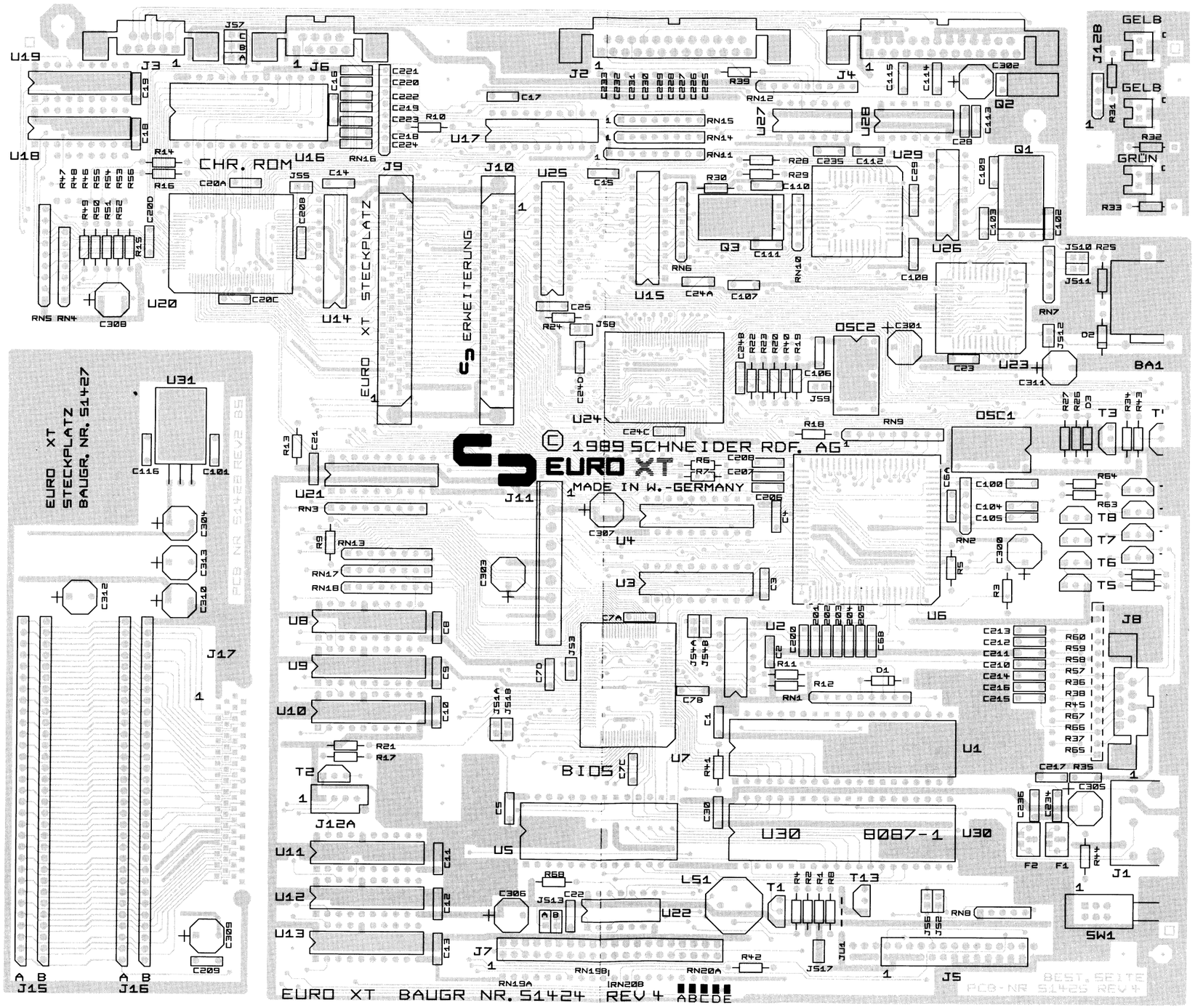
J12B is connected to a 4 pin flat cable which soldered and not removeable



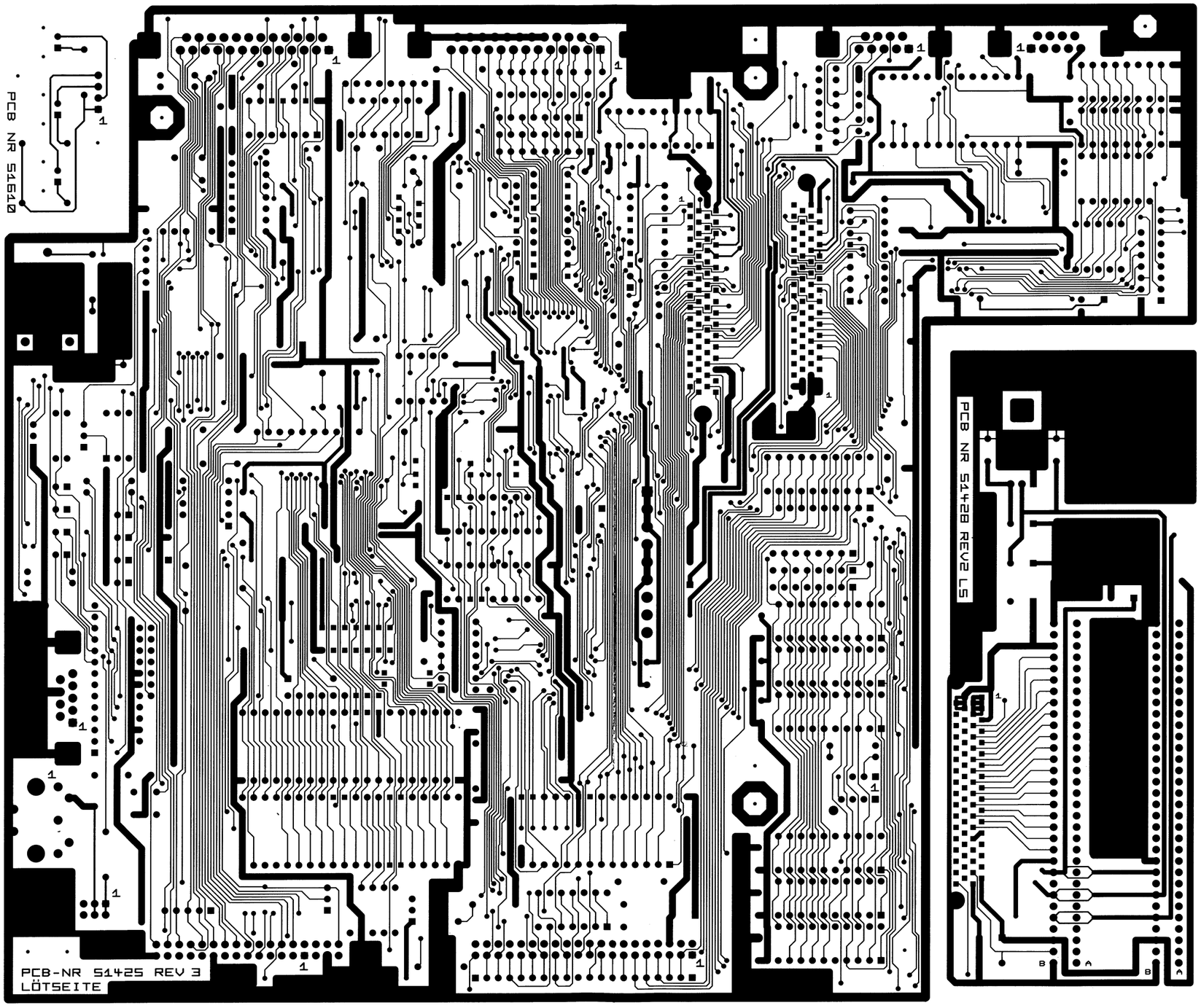
EXT4_22

Schneider			
DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51610	REV 4
DATE: 10-06-89	SHEET: 22 of 22		

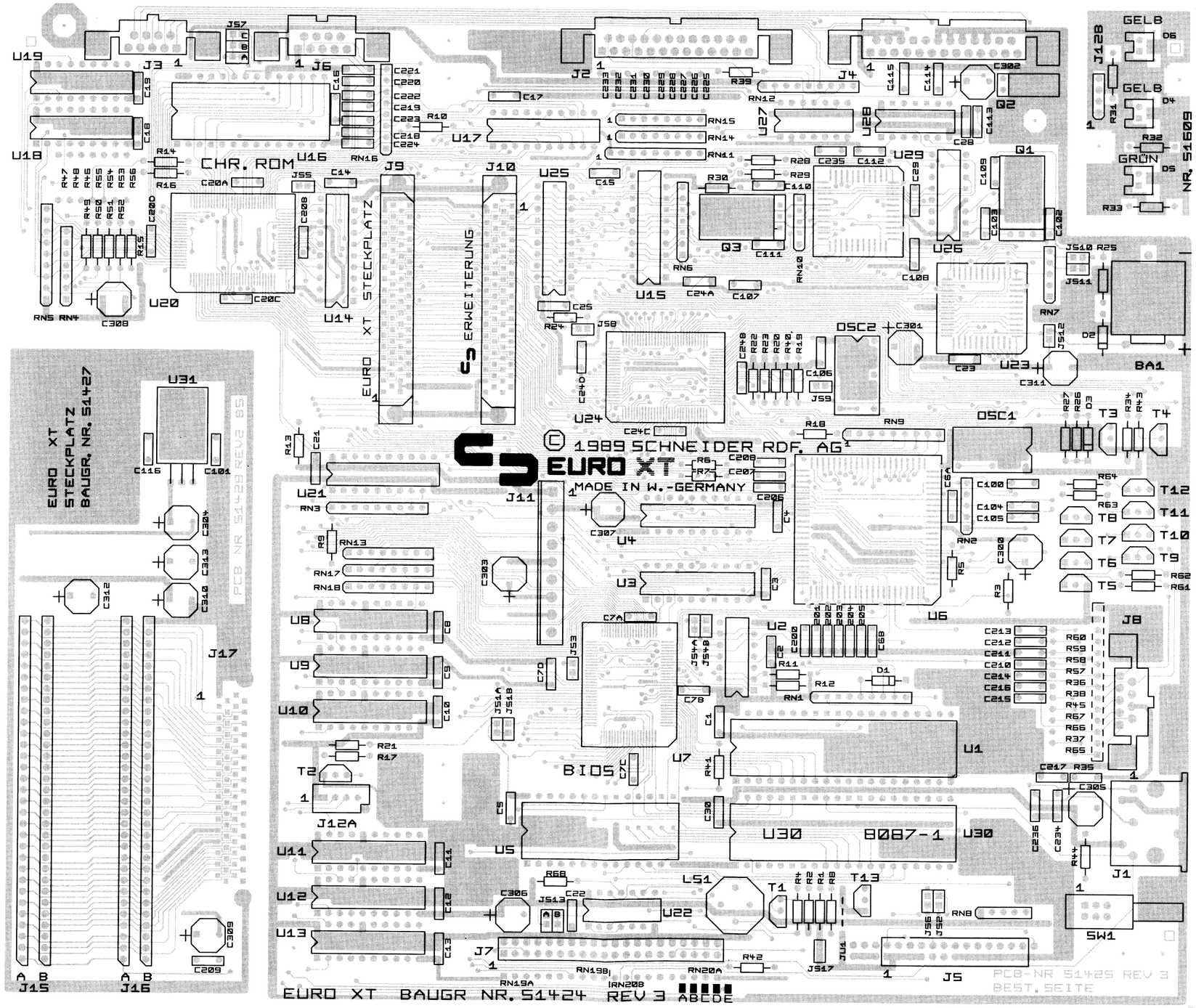
Component side



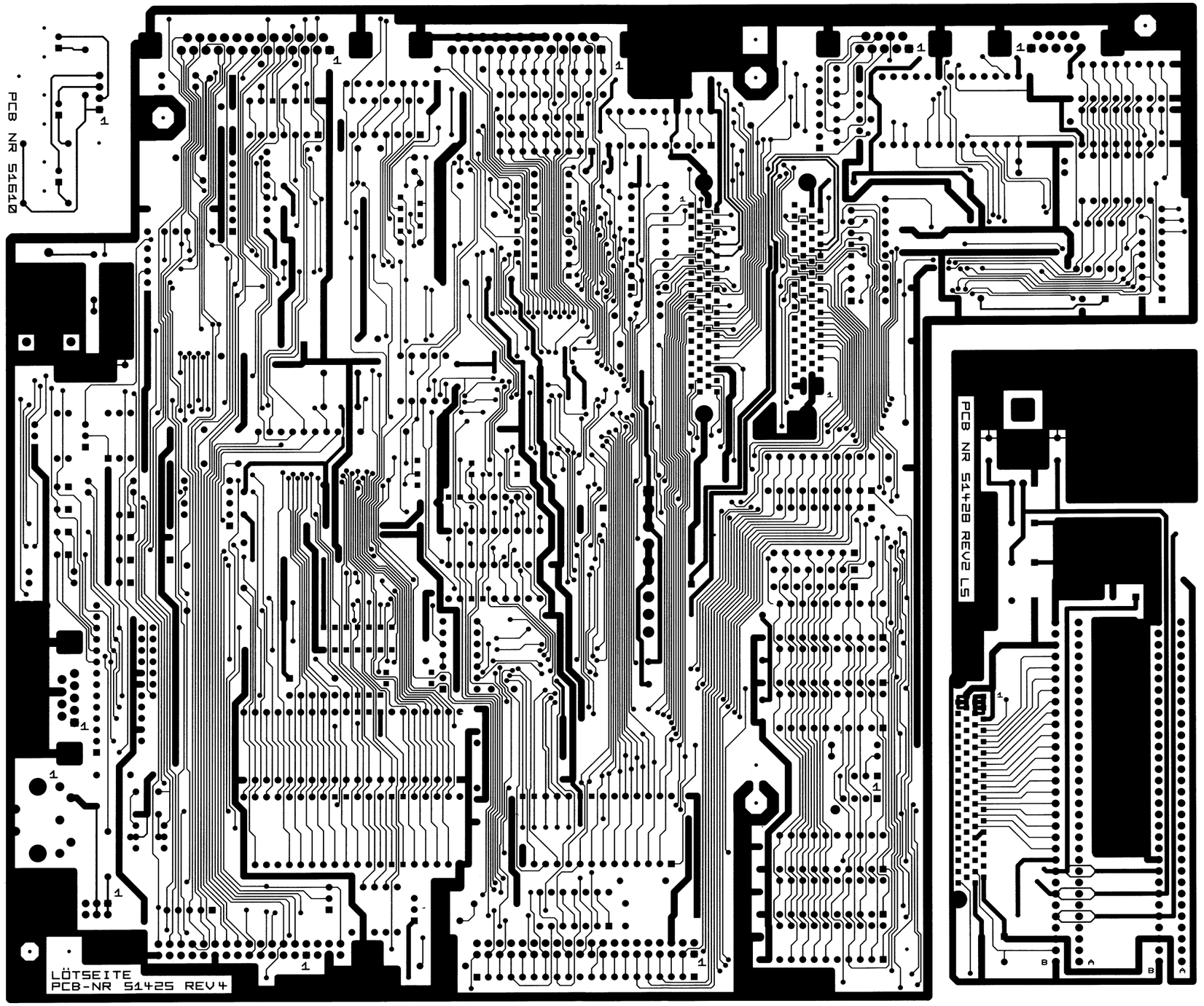
Soldering side



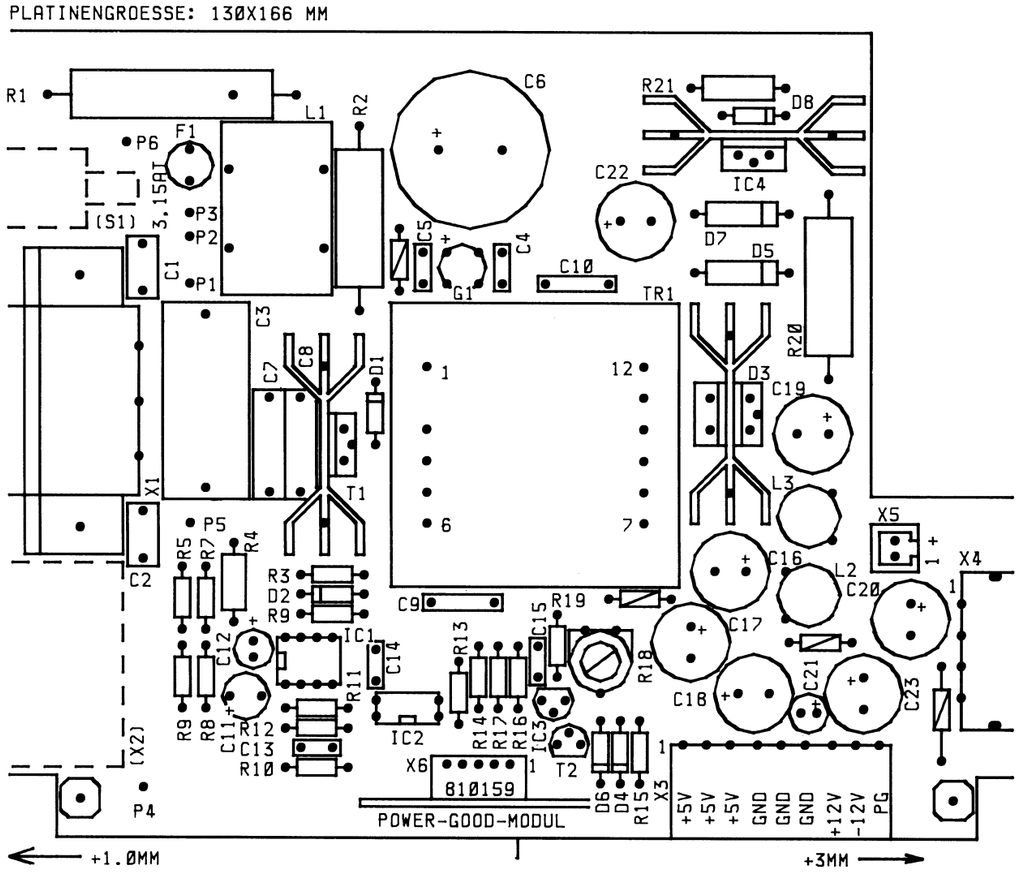
Component side



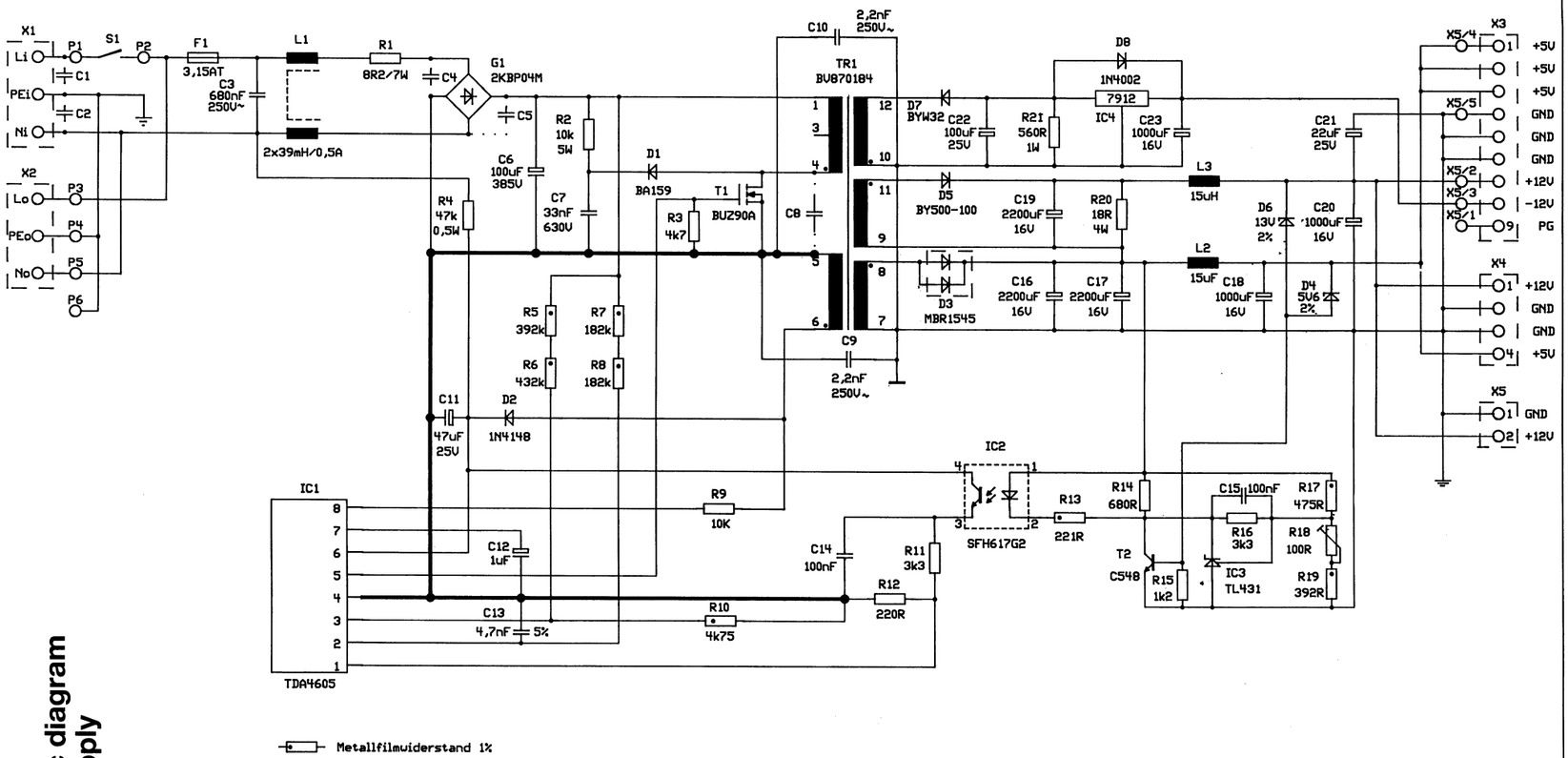
Soldering side



Power supply
Component side



Schematic diagram
Power supply



Platine 810154v2			Masstab	
			STROMLAUFPLAN	
	Datum	Name		
	Bearb. 30.05.89	Hierse	SNT60300	5V/7A 12V/2A(2,5A) -12V/0,3A
	Gepr.			
	Norm			
Werner Blum - Elektronik D - 8907 Thannhausen			580031	BLATT 1 Bl.

Ersatzteilliste für Systemeinheit Euro XT
Parts List for System Unit Euro XT

Best.-Nr. Part.-No.	Bezeichnung	Description	Zeich.-Pos. Ref.-No.	Preisgruppe
50 100 00	IC SAB 80 88-1 P	IC SAB 80 88-1 P	U 1	C 9
50 123 00	IC 74 F 00	IC 74 F 00	U 2	A 5
50 128 00	IC 74 LS 244	IC 74 LS 244	U 3, 4	B 0
51 463 00	IC BIOS 27256	IC BIOS 27256	U 5	C 9
50 103 00	IC FE 2010 A	IC FE 2010 A	U 6	E 3
50 774 00	IC SARA MSM 79H000	IC SARA MSM 79H000	U 7	C 7
50 160 00	IC DRAM 256K × 4	IC DRAM 256K × 4	U 8–13	D 0
50 129 00	IC 74 LS 245	IC 74 LS 245	U 14	B 0
50 125 00	IC 74 HC 373	IC 74 HC 373	U 15	A 7
50 146 00	IC ROM 64K 200nS (D)	IC ROM 64K 200nS (D)	U 16	C 3
50 128 00	IC 74 LS 244	IC 74 LS 244	U 17	B 0
50 110 00	IC DRAM 64K × 4	IC DRAM 64K × 4	U 18, 19	D 4
50 104 00	IC PVC 4	IC PVC 4	U 20	E 5
50 129 00	IC 74 LS 245	IC 74 LS 245	U 21	B 0
51 145 00	IC 74 LS 125 DIL	IC 74 LS 125 DIL	U 22	A 5
50 105 00	IC WD 37C65A/B-JM00	IC WD 37C65A/B-JM00	U 23	D 5
50 773 00	IC BIG JIM TC110 G008	IC BIG JIM TC110 G008	U 24	D 1
50 129 00	IC 74 LS 245	IC 74 LS 245	U 25	B 0
50 108 00	IC M 3002	IC M 3002	U 26	C 3
50 120 00	IC MC 1488	IC MC 1488	U 27	A 5
50 121 00	IC MC 1489	IC MC 1489	U 28	A 5
52 118 00	IC 8250 National	IC 8250 National	U 29	C 3
50 238 00	IC 7905 TO 220	IC 7905 TO 220	U 31	A 6
50 711 00	IC ROM 64K 200nS (P)	IC ROM 64K 200nS (P)	U 16	C 3
50 712 00	IC ROM 64K 200nS (GR)	IC ROM 64K 200nS (GR)	U 16	C 3
50 713 00	IC ROM 64K 200nS (DK/N)	IC ROM 64K 200nS (DK/N)	U 16	C 3

Note: All spare parts with countryindex are reserved for foreign distributors only.

Ersatzteilliste für Systemeinheit Euro XT
Parts List for System Unit Euro XT

Best.-Nr. Part.-No.	Bezeichnung	Description	Zeich.-Pos. Ref.-No.	Preisgruppe
51 042 00	Transistor BC 327 B	Transistor BC 327 B	T 1	A 2
50 358 00	Transistor BC 337 B	Transistor BC 337 B	T 2–8	A 6
51 042 00	Transistor BC 327 B	Transistor BC 327 B	T 9–13	A 2
50 338 00	Diode 1 N 4148	Diode 1 N 4148	D 1–3, 7	A 2
51 040 00	Quarz 32,768 kHz	Crystal 32.768 kHz	Q 2	A 7
50 312 00	Quarz 1,8432 MHz HC-18U	Crystal 1.8432 MHz HC-18U	Q 3	B 5
51 041 00	Oszillator 28,636 MHz	Oscillator 28.636 MHz	OSC 1	C 3
50 313 00	Oszillator 16 MHz	Oscillator 16 MHz	OSC 2	C 3
50 319 00	R-Netzwerk 8 × 4K7	R Network 8 × 4K7	RN 1	A 3
51 048 00	R-Netzwerk 4 × 4K7	R Network 4 × 4K7	RN 2	A 3
50 319 00	R-Netzwerk 8 × 4K7	R Network 8 × 4K7	RN 3	A 3
51 049 00	R-Netzwerk 6 × 33K	R Network 6 × 33K	RN 4	A 3
51 050 00	R-Netzwerk 8 × 33K	R Network 8 × 33K	RN 5	A 3
50 320 00	R-Netzwerk 6 × 680K	R Network 6 × 680K	RN 6	A 3
51 048 00	R-Netzwerk 4 × 4K7	R Network 4 × 4K7	RN 7	A 3
51 046 00	R-Netzwerk 4 × 1K	R Network 4 × 1K	RN 8	A 3
51 050 00	R-Netzwerk 8 × 33K	R Network 8 × 33K	RN 9	A 3
51 047 00	R-Netzwerk 4 × 2K2	R Network 4 × 2K2	RN 10	A 3
50 317 00	R-Netzwerk 8 × 1K	R Network 8 × 1K	RN 11	A 3
50 319 00	R-Netzwerk 8 × 4K7	R Network 8 × 4K7	RN 12	A 3
50 382 00	R-Netzwerk 4 × 68R	R Network 4 × 68R	RN 13	A 3
50 318 00	R-Netzwerk 4 × 33R	R Network 4 × 33R	RN 14–16	A 3
50 382 00	R-Netzwerk 4 × 68R	R Network 4 × 68R	RN 17, 18	A 3
50 321 00	PTC PCL 0250,0	PTC PCL 0250.0	R 35	A 9
51 717 00	Resettaste	Push-button, reset	SW 1	A 9
50 126 00	Batterie 3,6 V	Battery 3.6 V	BAT 1	B 8
50 332 00	Piepser	Buzzer	LS 1	A 8
51 140 00	Buchse Dioden 5pol.	Socket 5-pin	J 1	A 9
50 133 00	Buchse SUB-D 25pol.	Socket SUB-D 25-pin	J 2, 4	B 2
50 131 00	Buchse SUB-D 9pol.	Socket SUB-D 9-pin	J 3	A 9
51 569 00	Stiftleiste RM 2,54 2 × 26pol.	Socket RM 2.54 2 × 26-pin	J 5	A 7
50 132 00	Buchse SUB-D 9pol.	Socket SUB-D 9-pin	J 6	B 0
51 085 00	Stiftleiste RM 2,54 2 × 20pol.	Socket RM 2.54 2 × 26-pin	J 7	A 7
51 385 00	Buchse SUB-D 9pol.	Socket SUB-D 9-pin	J 8	A 9
51 521 00	Steckver. CHAMP 68pol.	Socket CHAMP 68pin	J 9, 10	B 4
51 431 00	Stiftleiste RM 3,96 JST B09-VH	Socket RM 3.96 JST B09-VH	J 11	A 5
51 616 00	Steckver. Leiterpl.	Socket P.C.B.	J 12A	A 5
50 180 00	Buchse CARDEDGE 62pol.	Socket CARDEDGE 62-pin	J 15, 16	B 1
51 523 00	Steckver. CHAMP 68pol.	Socket CHAMP 68-pin	J 17	B 5

CAUTION:

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

Ref.: IEC/74 (Central Office) 104.

Euro XT Appendix A:

Different schematics Rev. 4 – Rev. 3

PARTS USED:

Ref. U	Ref. R	Ref. R	Ref. C	Ref. C	Ref. RN	Ref. T	Misc.
1	1	63	1	100	1	1	OSC 1
2	2	64	2	101	2	2	OSC 2
3	3	65	3	102	3	3	OSC 3
4	4	66	4	103	4	4	
5	5	67	5	104	5	5	
6	6	68	6A	105	6	6	
7	7		6B	106	7	7	
8	8		7A	107	8	8	Q 1
9	9		7B	108	9	9	Q 2
10	10		7C	109	10	10	Q 3
11	11		7D	110	11	11	
12	12		8	111	12	12	
13	13		9	112	13	13	
14	14		10	113			
15	15		11	114			SW 1
16	16		12	115	16		
17	17		13	116	17		
18	18		14	117	18		
19	19		15		19A		
20	20		16		19B		LS 1
21	21		17		20A		
22	22		18		20B		
23	23		19				
24	24		20A	200	Ref. JS		BAT 1
25	25		20B	201	1A		
26	26		20C	202	1B	Ref. J	
27	27		20D	203	2		JU 1
28	28		21	204	3	1	
29	29		22	205	4A	2	
30	30		23	206	4B	3	
31	31		24A	207	5	4	
	32		24B	208	6	5A	
	33		24C	209	7A	5B	
	34		24D	210	7B	5C	
	35		25	211	7C	5D	
	36			212	8	6	
	37			213	9	7A	
	38		28	214	10	7B	
	39		29	215	11	8	
	40		30	216	12	9	
	41			217	13A	10	
	42			218	13B	11	
	43			219		12A	
	44			220		12B	
	45			221		13	
	46		300	222			
	47		301	223		15A	
	48		302	224		15B	
	49		303	225	17	16A	
	50		304	226		16B	
	51		305	227			
	52		306	228			
	53		307	229			
	54		308	230		Ref. D	
	55		309	231			
	56		310	232		D 1	
	57		311	233		D 2	
	58		312	234		D 3	
	59		313	235		D 4	
	60			236		D 5	
	61					D 6	
	62						

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
1	ADVANCED ENGINEERING RELEASE	04-17-89	
2	FIRST LAYOUT	07-25-89	
3	PRODUKTION LAYOUT	08-07-89	
4	CHANGED FLOPPY-SELECT LINES	09-05-89	

DRAWING FILES:	CONTENTS:
EXT3_1.DWG	THIS SHEET
EXT3_2.DWG	PROCESSOR,SARA
EXT3_3.DWG	FE2010A SECTION
EXT3_4.DWG	768 KB MAIN RAM
EXT3_5.DWG	ASIC 'BIGJIM'
EXT3_6.DWG	FLOPPY INTERFACE
EXT3_7.DWG	HARDDISK INTERFACE
EXT3_8.DWG	SERIAL INTERFACE
EXT3_9.DWG	REAL TIME CLOCK
EXT3_10.DWG	PVC4 VIDEO CONTROLLER
EXT3_11.DWG	VIDEO RAM, CHAR. ROM
EXT3_12.DWG	KEYBOARD INTERFACE
EXT3_13.DWG	CONNECTORS I
EXT3_14.DWG	CONNECTORS II
EXT3_15.DWG	CONNECTORS III
EXT3_16.DWG	VGA ERWEITERUNGSSLOT
EXT3_17.DWG	JOYSTICK INTERFACE
EXT3_18.DWG	BLOCK CAPS
EXT3_19.dwg	BUS-BOARD MAIN CONNECTOR
EXT3_20.dwg	BUS-BOARD SLOT-1
EXT3_21.dwg	BUS-BOARD SLOT-2
EXT3_22.dwg	BUS-BOARD PWR, LED PANEL

EXT_31

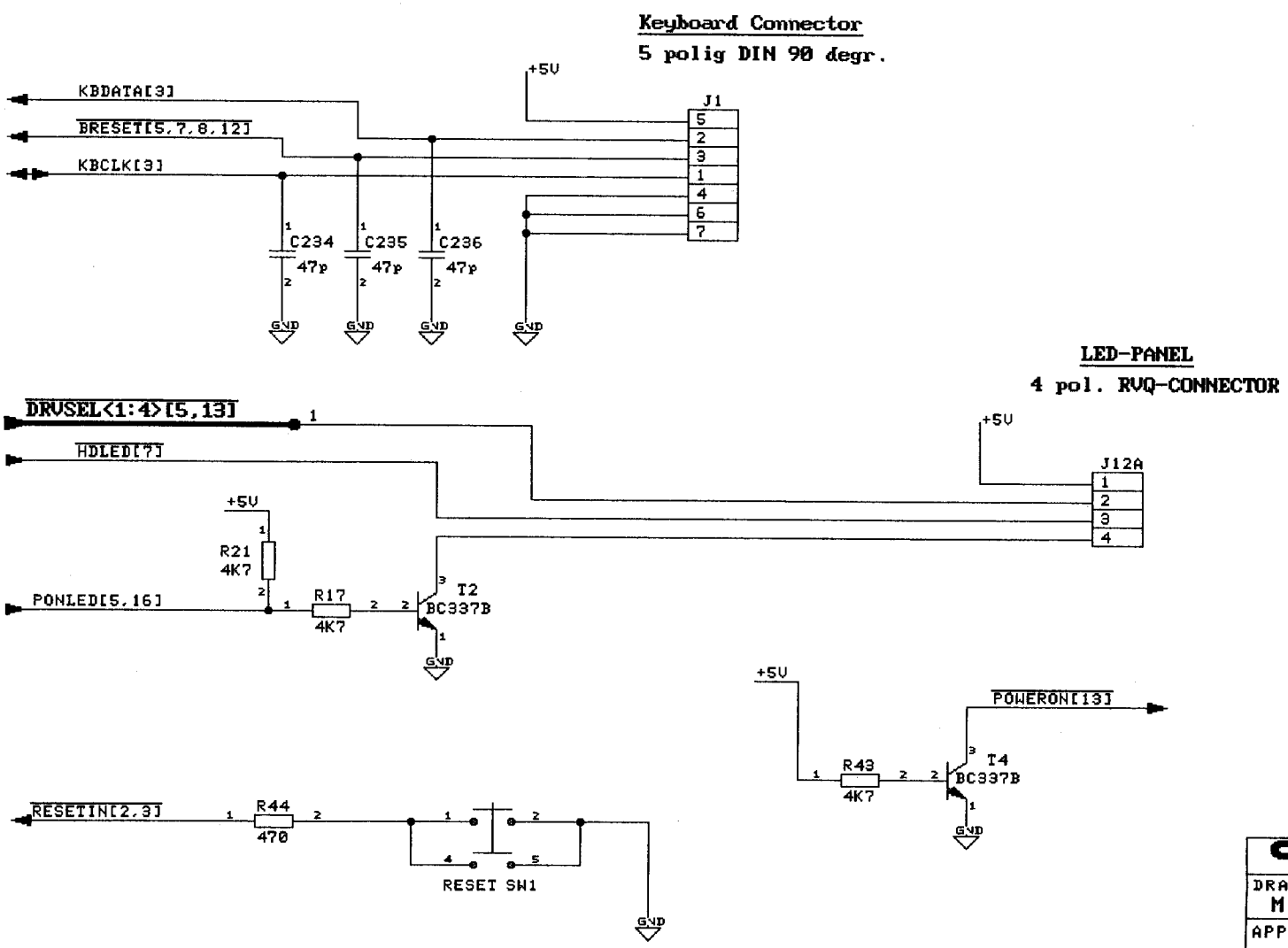
Schneider

DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 3
DATE: 09-05-89	SHEET: 1 of 18		

104

8 7 6 5 4 3 2 1

KEYBOARD INTERFACE , RESET BUTTON, POWER-LED, HDU-LED



XT_312

Schneider			
DRAWN BY: M. HEFELE	TITLE: SCHEMATIC EURO-XT		
APPROVED:			
USED ON: Euro-XT	SIZE A3	51424	REV 3
DATE: 09-05-89	SHEET: 12 of 18		

Fehlercode-Tabelle für SCHNEIDER EURO PC, EURO PC II, EURO XT

Die Geräte führen beim Einschalten einen Selbsttest durch, bei dem die einzelnen Komponenten des Computersystems geprüft werden. Im Fehlerfall wird die laufende Testnummer als Tonfolge über den Lautsprecher ausgegeben. Die Tonfolge besteht dabei aus zwei Teilen, die durch eine lange Pause getrennt sind. Die Nummer wird durch kurze Töne ausgegeben.

Fehlernummer (Beep-Code)	Fehlerursache
1-2	Fehler bei der Initialisierung Floppycontroller
2-0	Allgemeiner Fehler mit Bildschirmanzeige (Ungültiger Setup-Inhalt in der Echtzeituhr, Tastaturfehler)
2-1	RAM-Größe paßt nicht zum SETUP
2-2	Hauptspeicher-, EMS-Speicherfehler
3-1	JIM nicht gefunden
3-3	Prüfsummenfehler ROM-BIOS
4-1	Datum, Zeitfehler in der Echtzeituhr
4-2	Prüfsummenfehler Echtzeituhr
4-3	Echtzeituhr Statusfehler
4-4	Echtzeituhr antwortet nicht

Error Code Table for SCHNEIDER EURO PC, EURO PC II, EURO XT

When switched on, the devices perform a self-test during which the individual components of the computer system are checked. If an error is detected, the current test number is output via the loudspeaker in the form of a sequence of tones. The tone sequence comprises two parts which are separated by a long interval. The number is output by means of short tones.

Error Number (Beep Code)	Cause
1-2	Floppy-controller initialisation error
2-0	General VDU error (Invalid setup in real-time clock, keyboard error)
2-1	RAM size not suitable for SETUP
2-2	Main memory, EMS memory error
3-1	JIM not found
3-3	ROM-BIOS check-total error
4-1	Date, time error in real-time clock
4-2	Check-total error, real-time clock
4-3	Real-time clock status error
4-4	Real-time clock does not respond